THE

SOUTHERN AGRICULTURIST.

MARCH, 1834.

PART I.

ORIGINAL COMMUNICATIONS.

ART. XIII.—*On the Culture of Corn; by* JOSEPH E. JENKINS.

Read the before Agricultural Society of St. John's, Colleton, and communicated by them for publication in the Southern Agriculturist.

"Edingsville, August 25, 1833.

Mr. President and Gentlemen,—A desire of conforming to the wish of our worthy ex-president, and the hope of somewhat contributing to the carrying into effect the patriotic object he had in view, that is the restoration of our Society to its former usefulness and excellence, has induced me to come forward as I trust it will, the many more able of our members, to lay before you their experience (as I shall mine) upon some subject of Agriculture or Horticulture, as may be most convenient, or with which they may be most conversant; and thus, shall we, by a simultaneous effort, perhaps, rescue this institution from premature decay, and again, place it upon that proud eminence which it once held amongst its sister societies of the States. Causes, its true, beyond our control, have unfortunately operated to effect its decline; but, gentlemen, allow me to congratulate you, these causes happily exist no longer; the political tornado which swept across our land, and which, for the time, distracted our attention from all other concerns, has passed by, and left us at leisure once

again to pursue our usual occupations, which, under the blessing of heaven, is the clothing of the earth with the most useful as well as the most ornamental of the vegetable world. Amongst which, and not the least conspicuous in either qualification, stands the prescribed subject of our present notice, the *Zea maize*, or Indian corn.

This plant, gentlemen, is indigenous to America. Those first adventurers, (our brave, pious, and consciencious ancestors,) who despised the dangers of the Atlantic, that they might, unmolested, worship in this wilderness, found, the rude uncultivated savage of this vast continent, from its centre to its extremes, nurtured and sustained by it. And, it is a subject of regret, that a matter so full of interest to the antiquarian, as the manner of its culture by the Indians, and the quantum of its production, should, from the many difficulties with which those pilgrims found themselves surrounded, after they had pitched their tents in this western world, have wanted a detailed account on which we could place reliance. Under the necessity, therefore, of rejecting as improbable, if not fictitious, the few notices I have met with in the early writers, I shall beg leave to introduce an extract found in an anonymous work published in London, in 1779. This work, goes not back sufficiently far, to satisfy our desire, but, gentlemen, as it is a notice of the early culture of this vegetable by our ancestors themselves, I shall extract it, and trust it will be sufficiently interesting to pay you for the time occupied in listening to it.

Speaking of Carolina, he says, "Maize and Indian 'peas seemed congenial to the soil, and as they had been 'cultivated by the savages for provisions, they were found 'also to be excellent food for European labourers, and 'more wholesome and nourishing than rice. Maize de-'lights not in a watery soil, but dry and loose land, such as 'the higher spots on the maritime parts of the province. 'As the use of the plough could not be introduced until 'the land was cleared of the roots of trees; to prepare a 'field for planting it, great labour was requisite. They 'generally made ridges with the hoe about five feet asun-'der, upon the top of which they planted the seed, about 'three inches deep. One gallon of seed will sow an acre, 'which, with skillful management, on good lands, will 'yield, in favourable seasons, from thirty to fifty bushels.

'While it grows it requires to be frequently weeded, and 'the earth carefully thrown up about the root of the plant, 'to facilitate its progress. As it runs high, at the root of 'it the Indian pea is planted, which climb up its stalk like 'a vine, so that the land yields a double crop. From the 'stem of maize large blades spring, which the planters 'carefully gather, and which when properly cured, the 'horses or cattle will prefer to the finest hay."

It is worthy of remark that in this extract, the preference is given to the Indian corn over rice, as food for labourers. That the higher lands were supposed by this writer to be better for its culture than the flats or bottoms must have proceeded either from ignorance in the art of draining, or from his not having been sufficiently careful in his investigations of the subject, for we, of the present day are well aware; and our practice sufficiently demonstrates, that lands cannot be too low for corn, provided they are beyond the reach of tide, and are capable of being kept dry. Our most productive fields are the alluvious runs which we find on our plantations, and which for centuries have been the depots of all the washings of the surrounding lands—the truth is, these were occupied in rice, which article was found more marketable, and the conclusions in this writer's mind, (who was not a planter,) although not philosophical, was natural enough; he found it thus cultivated and supposed that every one should know his own business best. He gives a good reason, however, for the plough not being used at that time, but what would he say to us, gentlemen, could he arise amongst us at this day, who, after fifty-five years experience, and when not a vestage of stump, or let, or hindrance remain, are still found, either from prejudice, or some other, just as good cause, labouring with the hoe, whilst our plough-shares on the few plantations on which they have as yet been introduced, may be found rusting in the fields for the want of use, with only one or two exceptions. How this prejudice first arose against the plough, in these islands particularly, is difficult at this day to determine, we may suppose many causes, but why it should still exist, as I know it does, in the minds of some, is wonderful and astonishing. Can we facilitate our work too much? Can we have too much time for the gathering of manure? If we can, gentlemen, then it is rational that we should still preclude the

use of this, to other portions of the world, indispensable implements.

The Indian pea noticed in the extract is, I presume, the common cow-pea now in use amongst us, an important article, which when planted with our corn, is an extra requiring no further labour than the mere planting, as the work which makes the corn will be sufficient, if they have been put in the ground early enough for the peas. Leaving the further notice of this extract, we shall now return to the main object of this address and proceed with our subject.

I consider this legacy, left us by the original inhabitants of this country, as a blessing, which, with skill and industry might be made of inestimable advantage. A blessing too, which we should be ashamed of not enjoying in its fullest extent, as it is, from its nature of a hardy character, and from it properties, of easy culture, may be brought to perfection on any and on every soil. Let me not be misunderstood—that there are some soils better adapted to its culture, as I have already said, than others, or rather on which nature has placed stronger deposits for its sustenance, is not my intention to deny; but it is my intention simply to assert that Indian corn can be efficiently cultivated on every description of soil on this island, and I believe throughout the United States, and that too, with but a single item of the knowledge of the properties of manures, and of the adaptation to the kind of soil in which they are used. He, Mr. President, who has been in the habit of manuring his lands for a few years, needs no book-knowledge to teach him, if he has been a close observer, that there are some kinds which will, under the peculiar circumstances of some seasons, burn up or blight vegetables on high lands, but which on low or moist lands would have been highly profitable and advantageous: and who has not likewise observed that a skillful admixture of manures has had a tendency to check, and indeed, to prevent this injurious effect. *En passent*—allow me to give an instance—by strewing your compost below and a sufficient quantity of marsh-mud above or with it, the latter becomes a corrective to the former, and the combination highly nutricious, let the seasons be what they may, and let the soils be as light or as arid as can be found within this vicinity. But it can be justly objected that these are heavy manures, difficult to be procured and

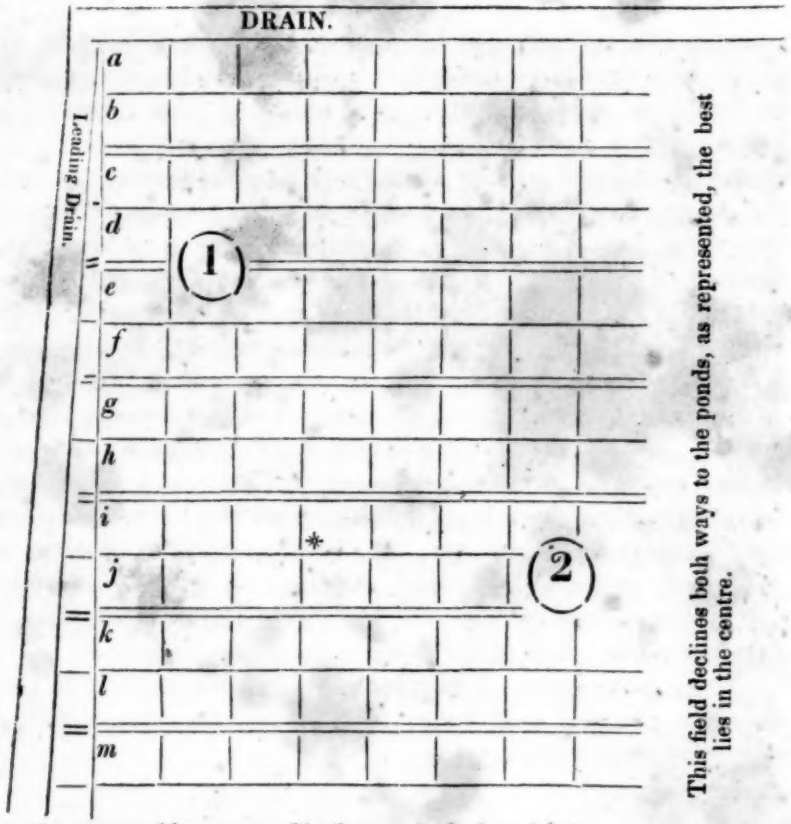
expensive to be carted; this is true, and as with all of our industry and assiduity, there is not one planter in ten who can procure more of these than is sufficient for his cotton fields, and as they must necessarily be manured, or we can expect no yield in this climate of alternate rain and drought, so it becomes us to look around and inquire what next is to be done, and how this difficulty is to be overcome?

Gentlemen, our beneficent creator never left a man without resources; he endowed him with faculties of mind, and placed necessities and difficulties before him as inducements to their exertion, when he condemned the earth to his sustenance and said, "briars and thorns shall it bring forth, and in the sweat of your brow shall you eat bread," it was a blessing in disguise, to prevent the stagnation of inactivity, and the imbicility of listless inertness. Man would have been a mass of filth and insignificence had the whole earth spontaneously reared to his hand (but to be plucked) all that was necessary for his subsistence. As the natives of some of the Southern Seas, he would have lost the character of his species, save in external form, and have adopted that of the hog and tiger mixed with that of the fox and hyena, groveling and cruel, crafty and disgusting. But no: man was blessed in the vicissitudes of climate, the piercing cold of winter, the scorching suns of summer, the hurricane, the tornado, and the earthquake, apparent curses, but real blessings; hence arises his true dignity; the dignity of bringing into operation these faculties which mark him the delegated ruler of the world; that necessity which compels him to exertion, and that exertion, which adduces the most lively, cheerful, and heaven-born sensations. The planter looks in vain for a more rational, and at the same time, pleasurable emotion, than that which arises from the contemplation of successful experiment; the bringing into beneficial operation, the impression either of his own mind or of others, whereby himself and his neighbours, in the most extended sense of that word, may be benefited. It is, Sir, a legitimate sense of joy—it is a bloodless victory, and the ancients justly esteemed that man higher, than the conquerer of cities, who by his wisdom, caused two spears of grass to grow where but one grew before. Let us, my friends, emulate their example, and happy are we, that on this very subject

of Indian corn, there is one in this State, who, in the shortest article that ever appeared in the *Southern Agriculturist*, has done more to make two ears grow on one stalk where but one grew before, than any other in the most laboured treatise, has or could have effected. This article, gentleman, though short, is full, and though unpretending, deserves all praise. It conveys one of those easily learnt lessons in Agriculture, which once attained, can never be forgotten; which once attempted, can never be relinquished—easy in its performance and bountiful in its effects, it speaks, at once, to the understanding and to the desires of man; it lessens his labour, while it increases his store, it diminishes expense whilst it adds to his profit; though but practical in its modest pretensions, it opens a vast field of speculation, and exhibits the grasp of a master's mind—the importance of apperiant in vegetable physiology, though but hinted at apparently, is sufficiently developed—their efficacy in facilitating the expansion of the lactial and absorbent vessels in living plants, for the induction into them of the rich juices, so necessary for the promotion of their growth, strength and wealth, is made sufficiently clear and satisfactory. And, gentlemen, I would again recommend it to your perusal and observation, it is to be found in the March number of 1831, of the Agriculturst, signed James King, sen. To myself, gentlemen, (and I do no violence to my candour in expressing it, but, I trust, suitably to express my unfeigned gratitude) it has been of the utmost importance, and I have no hesitation in declaring, that had I been acquainted with it some fifteen years ago, it would have been the saving to me of some hundreds of dollars. Let not, Sir, the fortunate possessor of lands sufficiently fertile by nature to bring abundant crops (for to such I speak not, they need no information) sneer at the still comparatively moderate yield which I shall this day bring to your notice, but rather let those, whose lot, like mine, has been cast upon a soil worn to sterility, who have laboured year after year, with little profit, expending manure, to little purpose, because injudiciously, look up with hope to the next harvest, and like me, by attending to its precepts, reap an advance upon the old system of at least fifty or one hundred per ct. The importance of keeping a minute or plantation book, has never so forcibly impressed itself upon my mind as in

penning this portion of these remarks. Comparisons, to be profitable, should be accurate, and that accuracy can only be found in careful statements made at the time when knowledge is certain, and memory has no need to be wracked and tortured by conjecture and supposition. For the want of such a book, I shall have to compare two of the very best crops ever, perhaps, made upon the land, instead of one of the worst, with the one planted in the manner directed by Mr. King. It was fortunate, however, as far as it goes, that in rummaging some old papers I happily found a statement of the corn-field planted in 1826, which land was again planted the last year, that is 1832. These two crops it is now my intention to compare before you. The statement says, "'This was a good crop 'averaging eighteen struck baskets to the acre, manured 'with compost on the list, at the rate of two baskets to 'the bed, as far as it would go, the rest of the field with 'live cotton-seed in the hill, a double handful to the hill 'on the corn when planted—cotton-seed the best."

Now, gentlemen, I beg leave to exhibit a plat of that field as planted last year, with a correct statement of every item respecting it.



a Compost stable manure, 3 baskets to the bed, and 8 cart-loads of mud to the task, - - - - -	yield	26½	53
b The same, - - - - - - - - - -		27	54
c Compost without mud, - - - - - - - -		25	50
d One peck of cotton-seed put under the listing, - -		27½	55
e do. do. do. - - - - - -		28	56
f Part hog-pen on the list, bedded on; part cotton-seed round the roots after up, - - - - -		26	52
g No manure, best land in the field, - - - - -		15	30
h Cotton-seed under the list, one peck, - - - - -		28	56
i do. do. do. - - - - - -		27½	55
j do. do. do. - - - - - -		27	54
k do. do. do. - - - - - -		27	54
l do. do. do. - - - - - -		20½	53
m do. do. do. - - - - - -		29	58
Acres in wedges on the left, manured with scrapings from the negro-houses, goose-pen, fowl-houses, &c. put around the corn, after, up at, first working, - - -	yield	24	
Total,		704 aver, 26 — & 2 over	

N. B. *The double lines represent double drains running into the leading drain upon each half acre. These were made some years before. The numbers represent struck baskets, a rather uncertain mode of counting, but common here, I believe. They may be supposed each to hold over three pecks, and in good corn where the ears are long, nearly a bushel; take off, therefore, one-fourth, leaves* 528 *bushels. Averaging* 19 *bushels and* 14 *quarts and* 2 *over, to* 27 *acres.*

There is a drain also connecting ponds No. 1 and 2, running in a straight line from No. 1 to *, and from thence to No. 2.—*Ed. So. Agr.*

I would remark upon this field as it stands before us. First, that the draining is so complete that, excepting in a small pond in the fifth line, no water can possibly remain upon the land long enough to do harm, or in the least, injuriously affect the corn. It is a dangerous error to suppose that corn cannot be injured by standing water; my present field, which has not the facilities for draining equal to the one I am now representing, has been injured to the amount of at least one acre, by the heavy showers of the past spring. Besides which danger, the difficulty of killing grass in lands inefficiently drained, should be an inducement to planters as effectually to drain their corn as they do their cotton-fields. In the second place, I would observe the difference in quantity of manure between the three first lines and the cotton-seeded lines. The two first had, in addition to the 60 bushels of compost, (as has the third,) eight cart-loads of mud to every quarter of an acre, and these cart-loads were ox-loads; nearly double as much as common mule-loads;—whereas the cotton-seeded lines had but five bushels to the quarter, or one peck to the bed, and behold the result, the cotton-seeded lines were better and more productive. In the third place you will observe that the very best line in the field was left unmanured, whose yield was nearly doubled by that of the last cotton-seeded line. Let me not, however, be unjust in the representation of the yield of this line, it had one quarter of an acre or better, highly stimulated; the compost pen of the last year having been placed upon it, and this quarter was magnificent indeed. I regret that it entered not into my mind at the time to break and measure it separately; the balance of the line was the highest and poorest in the field. In the fourth place, I would remark upon the wedge or triangular acre, that although highly manured with the rich scrapings of the negro-house yards, goose-pen, and fowl-house, its yield was next to the lowest in the field: this I attribute to not having placed the manure under the listing or bed, but around the corn at the first working. Corn should receive the stimulant of manure from its first shooting from the grain, the advantage is maintained throughout its whole after existence, and I am convinced, from my experience, that the gain is considerable. In the fifth place,

I would notice the little advantage of the muded and compost lines, over the line which had the compost alone; for the first line I could account by referring the effect to its being next to the hedge of trees which border the field on that side, and the depredations of squirrels and birds which preyed upon it considerably; likewise the shade of trees in the morning, and the detractive power of their roots, notwithstanding the ditch. But how to account for the second, I am at a loss, as it was always the most dark and glossy leaved line in the field. Can it be that salt-mud is so little efficacious? or was there too much? Had the compost to contend against and counteract the too sceptic effect of the salt, which had a tendency to cause the plant rather, to produce leaves than ears? I leave the question for the consideration of the Society, and trust that some gentleman will undertake its solution.

(*To be continued.*)

ART. XIV.—*Observations on the collecting of the Seeds of the Gama-Grass, for distribution, and the value of this Grass for feeding cattle; by* WILLIAM ELLISON.

"Fairview, January 4, 1834.

Dear Sir,—Many applications having been made to me, for seed of the Gama-grass, during the last year, and inquiries made of me respecting it, I have addressed this communication to you, to instruct applicants how to proceed to obtain a supply hereafter, and to give one general answer to all the queries of correspondents about it. The principal reliance for collecting it, is on the negroes of the neighbourhood, as in the present infancy of the culture, the planters, generally, will not trouble themselves about it. The number of those who will give themselves much trouble, to serve the public without profit, is but small, for among the mass, the selfish greatly prevails over the social

principle. Some have requested of me a small supply, offering any compensation for it; others have written for a large supply, if to be obtained on reasonable terms, and a few have written for them as a favour. Such seed as I have gathered myself, I have distributed gratuitously among my friends, and sent to distant applicants, and such as have been gathered by slaves, have been paid for. If the culture of this grass be an object of public interest, some general plan should be adopted, to collect and save as much of the seed as possible; and as from its growing popularity, it is probable that many more applications for seed, will be made in the course of this year. There are two places in this district, where considerable quantities of this grass are found; on Dutchman's Creek and the Wateree, and there may be others, with which I am unacquainted. I suppose that from five to twenty bushels of the seed, might be saved, with proper exertion and deligence, in the course of the season. I have offered the negroes different prices to ascertain at what rate it could be obtained from them—at 12½ cents per quart, I obtained but little, and that very indifferent; but at 25 cents they gathered it readily. I should say, therefore, that applicants might obtain them at that price, with the expense of postage and cost of transportation. I would suggest to applicants the following plan: let letters be addressed to me, postage paid, at an early period, (the sooner the better) but at all events, by the 1st of June, specifying the quantity required, and inclosing the money. This will give me an opportunity of ascertaining the quantity required, and time to notify the neighbouring negroes of the demand, and to instruct them in the mode of gathering it; for without instruction, they pick up and collect every kind of worthless trash. Should the demand exceed the supply, I shall have to divide them rateably and return the balance of the money to the owners. I require the money to be advanced, because my own necessities will leave me nothing to advance myself, and the negroes are troublesome duns for any little matter that is due to them, and their diligence and alacrity are greatly quickened by prompt payment. This is the best plan that I can devise, for spreading the culture of this grass. To supply all the demands for seed during the last year, would have required several bushels; but none of the applica-

tions came soon enough to hand. Letters addressed to me, should be directed to "Popular Spring, Post-Office," as those directed generally to Fairfield District, go to Winnsborough, where they often remain a long time before I receive them. To comply with my engagement, as above stated, will of course give me some trouble without profit, but this I will disregard, if I can contribute to the public benefit. Liberal minds live for society as well as themselves, and in doing so, enjoy a pleasure, to which narrow and selfish minds are strangers. I would advise those who live at a distance, in other States, to name some person in some of the towns, on the principal stage routs to whom parcels or packages may be sent. I mention this, because applications have been made, from the adjoining States, as well as from various parts of this State: and to send them by mail, would, at the ordinary rate of postage, make them come very high. In thus offering to serve the public, I cannot promise to assort the seed, so as that all will vegetate. I know from experience, that such an undertaking would be very troublesome, as many of them are false: I can, however, prevent a parcel of useless trash being sent for good seed.

Sundry questions have been submitted to me about it, as whether it would be valuable for milch cows? What kind of land suits it best? Whether, in my opinion, the roots would bear for a number of years such constant mowing, as it appears to be capable of in one season, and the best mode of planting it? Much respecting this grass still rests in speculation; it is, however, in the hand of intelligent and enterprising men, who have given to the public the result of their experiments, and it is needless to repeat what has been already stated. Whether green or dry, I regard it as fully as valuable as corn-blades, for all purposes, and whoever will give milch cows a sufficiency of the latter, will find them increase greatly in milk; and it is as good, when cured, as the best fodder. Whether it will prove as valuable to the country, as some have anticipated, remains to be determined by experience. I think its value will mainly consist in furnishing the means of permanent grass lots, or plats, or meadows; as it will be very troublesome to extend it over extensive fields, like clover and some other grasses, from the difficulty in collecting seed. For lots and meadows of a few acres, I think no-

thing we cant plant, will be more productive and valuablue. Alluvial soils will suit it best, and it thrives best, I think, in all lands having a clay bottom, whether alluvial or upland. It will grow in all lands, that will produce corn, but will stand greater extremes of wet or dry than the latter. The distance proper for planting it, has been already stated, and will be, I conclude, a matter of choice to the cultivator. Squares of eighteen inches or two feet, according to circumstances, are the most convenient distances. In rich alluvial land, or high land highly manured, squares of two feet, in two seasons, will be nearly, if not entirely filled, with the mass of blades. The seed may be planted as soon as gathered, and the young plants will acquire sufficient strength to withstand the winter; but unless planted then, January is the best time. The roots may be planted out at any season, when there is sufficient rain or moisture. The last inquiry—what number of years—the roots can stand repeated mowing, is a matter of conjecture. I have already stated, that I think a lot of it, would last a man, during his life, and might be transmitted to his posterity, and I thiuk so yet. The standing complaint against it here, is the difficulty of destroying it when firmly rooted. All entertained prejudices against it on that account, and some had determined to commence active hostilities against it, and extirpate it, if they could, until informed of the uses, to which it might be applied, and they have concluded to treat it as a friend, instead of regarding it as an enemy. About three miles lower down on the creek, on a very old plantation, there is more of it to be found, than on any place within my knowledge; some part of it has been turned out, for some years, and exposed to stock, and kept constantly eaten down, and yet the roots maintain their ground. If they will bear such severe cropping by stock, I should think the grass blades would scarcely destroy them. On my own place there are bunches, whose roots spread out four feet in diameter. These bunches have become annular, the center of the mass of roots producing but thinly; from the roots there becoming dry, decayed and woody, but nothing more is necessary than to tear them to pieces with any thing that is most convenient to produce new vigour and productiveness. I have dis-

turbed some of these old bunches, and torn them to pieces with the grubbing hoe; and where these old callous roots were, I find a young and vigorous growth of roots and blades. A plantation of it that began to exhibit symptoms of decline, might, in my opinion, be regenerated and renewed, by running through it with a strong coulter, drawn by as much power, as might be necessary, in different directions, and tearing the old roots to pieces.

High wrought expectation seems to be formed respecting it, and whether they are to be realized or not, time only will shew. There is a fascination in novelty which often leads to splendid dreams and extravagant calculations. Enough has already been published respecting it, to shew, that rightly managed, it will prove of very great value to Southern agriculture; if we even make large deductions from the estimates that have been made.

The following observations may be serviceable to those who live near to where this grass is to be found, and are not good judges of the seed. The sound seeds have the eye close set, firm, hard and glassy, and generally dark coloured. Such as have the eye pale, soft, and yielding to the pressure of the thumb nail, are false, and in such as have the eye pushed out, or protuded from the surface, although dark, the grain will appear to be black and blasted.

I have been asked, if I have not given this grass a fair trial. I have not as yet cultivated it, owing to causes, with some of which, I will not trouble the public. The principal, however, is this: I was induced to purchase the place I now occupy, on account of the low rate at which it was offered to me, by the acre, and on account of its capacities for improvement, possessing as it does, almost every kind of soil. I sold the place I lived at, a few years ago, and removed to this. It had been suffered to fall into decay, in such a manner, that my whole time has been devoted to repairs. I likewise formed a mistaken estimate of the time and expense, necessary to put it in profitable condition. It has, consequently, put it out of my power to crop to advantage, and has embarrassed me so, that I have thought it would be advisable, in order to avoid suits and judgments, to which I have not been accustomed, to sell it, and buy a smaller

place, and as, until very lately, a general prejudice existed against this grass, planting any considerable quantity of it, might have been considered as an objection, instead of a benefit. I should regret the necessity of selling, as I am prepared now for profitable operations, such as manuring, clearing, &c. and a removal would put it out of my power to serve the public in the distribution of seed. A loan of two thousand or two thousand five hundred dollars for two years, with interest, payable annually, would obviate that necessity. There are doubtless, many, who could do this without inconvenience, and they might do it without risk, and as has been flatteringly intimated, I deserve to be ranked among the number of public benefactors, by my efforts to extend the cultivation of this grass, such person or persons, as would advance this loan, would be entitled to a share of the credit, by enabling me to continue my exertions, in that particular. My experiments and observations have been confined to this grass, in its native state, and I have communicated to the public, all that I know at present respecting it.

WILLIAM ELLISON.

ART. XV.—*On Protecting Seed-Corn from the Depredation of Birds; by* H. C. R.

"January 25, 4834.

Mr. Editor,—A Young Planter in your November number says, "there are many of your readers who can make valuable communications." If you think the method I have adopted to get rid of minding corn when planted, as coming under that head, you are welcome to it. It is by *sooting*.

Half a bushel of seed-corn is put in a tub, and hot water poured on it, a *half-pint* of tar is then added, and the

corn kept constantly stirred until every grain is thinly coated with it. Soot is now put in and the whole stirred until every grain is perfectly black. This method I have adopted for many years; never have a minder, and the stand is much better than when I had to mind it. The crows and larks will visit your fields as soon as the grain makes its appearance, (which will be two days later than when not sooted,) and try many of the hills, croping one grain and then leaving and going to a second, having plucked here and there, they will leave the field entirely, finding the grain too bitter to be eaten. As we always plant more than we mean to have, the few they take is not of the least consequence. If this communication is of any service, I shall be gratified, remembering this is nothing new, but it may be to some, of value.

H. C. R.

We adopted this plan many years ago, and never had occasion to place any one in the fields, nor had we ever to supply more places than was usual, where there was a regular supply of little negroes to scare away the birds. In one respect, this plan answers better than the old one of minding, for less injury is sustained from larks; which birds being small, and flying low, are exceedingly troublesome. The soaking in water ought never to be omitted, and we have usually found that twelve hours was not too much: we generally put the corn in water the night previous to its being used. Should the grain not imbibe moisture enough before it is coated with the tar, and dry weather follow its planting, there will be a difficulty in getting it up, which will not be the case if soaked twelve hours.—*Ed. So. Agr.*

ART. XVI.—*On Sea-Ashes as a Manure; by* N. HERBEMONT.

Extract of a letter addressed to the Hon. Whitemarsh B. Seabrook, and communicated by him for publication in the Southern Agriculturist.

"Columbia, (S. C.) January 26, 1834.

Dear Sir,—The subject of the finest and best, together with the most profitable quality of cotton is, of course, one of the most important considerations, not merely to the cotton-planter, but to the State at large. I noticed some time since the title of an article proposing salt as a manure for the purpose of increasing the fine staple of the cotton. I have not read this article; but I should judge, *à priori*, that the idea is probably a correct one; for, most certainly, the finest cotton produced is that cultivated within the influence of the sea-air. This reminds me of a manure that has been in use in Holland, and adjoining countries that is so valuable as to be transported, even by land carriage to very considerable distances, and has been for very many years a most important article of commerce. It is called "*Cendres-demer*," (sea-ashes,) and is nothing else than salt or brackish marsh or peat, reduced to ashes. By this process of burning, this substance is rendered comparatively very light, and probably its fertilizing properties concentrated. There is probably no country on this globe that has more of this substance than these Southern States, and I feel a great desire that it should have a full trial, not merely for the use of the cotton-planter; but for all other cultivators of the soil within a practicable distrance from the seas. If I could procure in time, this coming spring, a small quantity of such ashes, were it only one or two barrels of it, I would give it a fair trial on my poor sandy land. You are so zealous an agriculturist, that I would expect from you an experiment with this manure on your own land, and that you would also prevail on some of your neighbours to try it. It appears to me that a kiln could easily be contrived, by which a considerable quantity of salt-marsh might be burnt at once, sufficient for a full experiment, which, if successful, might induce some enterprising and patriotic persons to undertake the manufacture of this manure on a large scale and for sale. It appears to me, my dear Sir, that we need, in

this country, something of this sort as a stimulus to ourselves as well as to our lands; for without some such encouragement, we become dispirited by the unproductiveness of our soils after a few years cultivation. The possession of a convenient means of adding fertility to our fields, would most probably encourage us to further exertions, which would, most probably, be followed by due advantages.

The selection of seed, with a view of procuring a finer staple of cotton, is, no doubt, an essential part of the business; but, is it sufficient? Is it not probable that there is a great deal also in the quality of the land, and can an extensive plantation or field be expected to possess, in every part of it, those properties on which the best and most profitable product in cotton may depend? It seems to me that such properties in the soil are more likely to be produced by the labour and ingenuity of man, aided by science, observation, experiment and untiring industry, than to be invariably or even frequently produced by nature. These "sea-ashes," which are found beneficial in Flanders, in France, &c. would, in all probability, be alike beneficial in this country, and we have very strong reasons to believe that this kind of manure is peculiarly adapted to the improvement of cotton. Ashes and salt being stongly stimulating manures, renders it very probable that by them you might obtain your desideratum, healthy and vigorous cotton-plants, joined to fineness, length and streugth of the product. This probability seems so great that it is most undoubtedly worth making the experiment.

Permit me to repeat also, that as an article of internal commerce for the amelioration of all the lands within reach of navigation or rail-road transportation, it may become an object, the importance of which, future times will alone fully appreciate.

I am, very respectfully, my dear Sir,

Your obedient servant,

N. HERBEMONT.

We have received a communication also on this manure, which we will give in our next number.—*Ed. So. Agr.*

ART. XVII.—*Continuation of the Remarks on Reclaiming Marsh-land, with an account of the preparation and product of, in Rice, the first year; by* Q. E. D.

"January 1, 1834.

The season of gaiety is over, Mr. Editor, the old year has taken its departure and the new one has commenced. It is natural that we should review that which is gone and endeavour to "mend our ways" in that which is to come. To make promises is always unwise, to break them is worse, ecpecially when their fulfillment depends upon ourselves. These reflections have presented themselves upon my recollecting a promise I made you last summer, but as I do not intend to deliver a lecture on ethics, I will proceed without farther exordium to the subject, to which I am anxious to call your attention.

In the July or August number of your valuable periodical, I detailed to you the process I had adopted of reclaiming marsh-land, and proposed at a future day to inform you of the yield of the field, whose history I then gave you. The land was planted in a rough state; it was neither turned, nor chopped, nor worked in any way preparatory to planting, except to hoe off the marsh and rush with which it was thickly covered. Trenches were drawn with the narrow hoe, backwards, and these were followed by the broad hoe side ways. The seed which had been soaked for twenty-four hours, was, on the 8th of May, sowed very thick, (two bushels to the acre)—our usual quantity is from a bushel and a half to a bushel and three pecks,) the higher spots, and such there are in all new land, were covered to protect them from the birds, and the tide was slowly let into the field: the first tide filled all the ditches and moistened the surface of the land, and two or three more, covered it entirely. In ten days the rice was distinctly to be seen in the various parts of the field, and nothing more was done, except to change the water when the tides were high, until the 10th of June, when I directed the water to be let off and the field dried, with the view of chopping down the marsh and rush, which had over-topt the rice. So soon as the field was cleared, the water was again put on and kept there, (with the exception of a day or two, when it was again hoed,) until the

rice had shot out; at this time the bank sunk, and the field was flowed every tide until the rice was cut. I do not think that this accident was injurious to the crop, except, that the luxuriant spots fell down, and were injured and sprouted. This loss, I put down at three bushels to the acre, and think, from what I can learn, this amount would cover the injury. The field was harvested on the 30th day of September, being four months and twenty days from the period of its being planted; it was stacked in the yard by itself, and as it was the last harvested, could not be mixed with any other rice. It has within a few days been threshed and winnowed, and then passed through the wind-fan, so as to clear it of all dirt, straw, and light rice. The grain is large, full and heavy; it has been carefully measured, and gives me 41½ bushels to the acre, and as it is the product of inland rice, hand picked, will be preserved for seed. This is by no means a large crop, Mr. Editor, and is not noticed as such, but merely to put you in possession of the whole experiment from first to last. Two of my friends on the main have planted new fields this year, and each of us have varied from the other in some important particular; the result, I hope, will be furnished you, so that we may ascertain whether it is advantageous or not, to bestow much labour on the surface of the land.*

Q. E. D.

P. S. I passed my summer in the mountains, or rather a part of it, having left home on the 1st of August, and did not see the strictures that had been made on my former communication by your intelligent correspondent 'Q,' until my return home in November. I mention this fact as an excuse for my not noticing them at an earlier period. It was certainly an omission on my part, not to notice the importance of highland earth in the formation of a river bank; but the remoteness of the highland from my field, is such as to preclude my obtaining it, and it escaped my recollection. The plan proposed by 'Q,' as coming from Mr. Myrick, is valuable, and he will confer a favour by naming the plantation on which it has been practised to any extent. In a small way, I have used the highland earth as suggested, but was not aware of its use in the

* We shall be very happy to receive an account of these experiments.—*Ed. So. Agr.*

centre of the bank from its top to the base on an extensive scale upon any plantation on the river.

Your correspondent finds fault with me for not stating the width of the base of the bank in low places or creeks, and says that want of width is the reason why such places are liable to be broken. I know of no rule on the subject as 'Q' supposes there is, but the base of my own bank is more than five times the highth of the bank. 'Q' is no planter, or he would have been aware that such places are never left to depend upon the width of the bank for support; studs are sunk, caps are put on them; string pieces are laid, puncheons are driven down, all with the view of sustaining these weak spots. Indeed, I am not certain that these spots can be considered dangerous, for so long as the wood lasts they cannot be broken.

I am indebted to 'Q' for his inquiries, and shall always take pleasure in solving to the best of my abilities, any difficulties that may occur to him in my hasty and faulty communications.

Your's, Q. E. D.

ART. XVIII.—*Remarks on the Cotton Caterpillar, with an Account of some Experiments on them; by* AN EXOTIC.

Mr. Editor,—The appearance of caterpillars, for several years past, have been unlike "angel's visits, few and far between," but are becoming very frequent, although not generally so destructive as in 1804, and previous to the last ten years. To the public, a few remarks on this subject are offered, which, it is true, will only detail a succession of unsuccessful experiments; but these may be as acceptable to enterprising and persevering agriculturists, as to let them drop still-born from the brain of the disappointed experimentalist.

I have seen my neighbour try to surround a section of a field where they were numerous, with a ditch—as soon as the butterflies' eggs were hatched, the whole field would be covered with them, not larger than an oznaburg thread. Another field has been illuminated nightly with the fires raised on scaffolds above the tops of the cotton-stalks, so as to attract the butterflies, and thus serve them as the candle does the candle-fly—scorch its wings, but they kept the "even tenor of their way," and, in a given time, denuded the stalks of every thing green.

Particular sections of fields have been beset by them, these have been carefully cut up, and as cautiously consumed with fire, yet the planter had to exclaim with the Frenchman, "*by Gar Monseur Ton-Son come again*"—Another neighbour kept a steady firing with a six-pounder. It all availed nothing so long as the caterpillar could get food—heavy thunder storms were as little heeded. Sulphur was kept burning under them, this seemed to sharpen their appetite—they were put into strong lye, lime-water, covered with red pepper; lime and every common caustic I could think of, with the same result. I burnt them with a sun-glass, this would make them hop and skip and run the faster, occasionally turning their head to the part that was burning, but they did not in the least appear to be sickened or deprived of activity. Finally, I took a feather dipped in oil, and bathed several worms with it, particularly under the belly. These in a short time sickened and died, and in as much apparent agony as a human being could express, under the torture and pain of gradual suffocation. This induced me to inquire into the cause, that oil should be so fatal to these insects. I found that the worm has no breathing organ like our lungs, but has tracheas or air-tubes along the lower parts of the sides, through these they imbibe an immense quantity of air, which is disseminated over every part of the body. The stomach, bowels, &c., also the legs, wings, and even the scales, separate and diffuse it over their surfaces like the minute vessels of leaves and flowers, apparently as if the air-tubes had exchanged functions with the heart and arteries. The stigmata or breathing points correspond with the folds or rings of the worm; and when it becomes a butterfly, with the flexures

or joints of the body. For this information I am indebted to Bell's Comparative Anatomy.

With these facts before us, the following conclusions may be drawn: that oil being insinuant and glutinous, the insect in breathing, when this unctious substance is applied, draws it in instead of air, and thus experiences the distress of suffocation which eventually causes its death by choaking up these trachea or air-tubes. Some economical plan might be adopted whereby gallons of oil may be sprinkled over the cotton-stalks, by a hand walking steadily through the alleys with an instrument of tin, similar to the spout of a watering-pot, filled with oil, and flirting it over the cotton bushes. If successful at first with the trial of one or two stalks, a whole field may be in the same way walked over by a very few hands in a short time, and I do not think much expense will be incurred, compared to the quantity of cotton saved. Four or five hundred dollars worth of oil thus expended, would be profitably laid out, if it saved a crop of cotton worth 10 or 20,000 dollars from being destroyed by these plagues of Egypt. This mode of destroying caterpillars may appear tedious, as well as expensive, but when we consider the previous labour of manuring, listing, bedding, planting, supplying, thinning, hoeing, hauling, and laying by the crop; to say nothing of the disappointment in seeing all our time, labour, and hopes thus frustrated, all gone, in "a little month" by these crawling race of insects, we must be at once satisfied, that if successful, it would be time, labour, and expense well bestowed.

My remarks, Mr. Editor, are merely speculations thrown out with no intention to mislead. I should be glad if some observant planter would try the experiment, first upon an individual worm, then, if so unfortunate as to have a crop of them in his field, carefully try the experiment upon one or two stalks of cotton, sprinkling on them the cheapest oil. The butterfly has enough instinct or native sagacity to lay its eggs only, where its young can instantly obtain the most suitable food. Why not then be induced to leave an atmosphere or food where so much poison lurks, to deprive them of health and existence? They may not immediately quit the stalks, but may cease eating voraciously, travel over the leaves with less satisfaction; and finally, avoiding propagating as they do

five hundred fold at each brood, and instinctively avoid "death in the pot."

AN EXOTIC.

ART. XIX.—*Remarks on the Reeling and Twisting of Silk, and preparing it for market; by* GIDEON B. SMITH.

[A parcel of Reeled Silk was sent to us last summer with a request that we should give our opinion of it, and also the best mode of reeling and twisting it, and softening the fibres and preparing it for market. Having no experience ourselves, we submitted them to Mr. G. B. Smith, (late Editor of the American Farmer,) who kindly and promptly replied to our queries. His remarks we have given for the benefit of such of our readers as are engaged in the culture of Silk.]—*Ed. So. Agr.*

The fibre of the silk is excellent. It was, however, badly reeled, and can therefore, be converted into good sowing silk or other thread, with difficulty and great waste. This evil can only be avoided by reeling two threads at a time,—that is, two sets of cocoons, and these threads should twine round each other between the basin and the reel, three or four times, by which process a cylindrical form is given the thread, and the fibres composing it are pressed together and firmly glued by the gum of the silk then in a fluid state. When thus reeled, the thread of raw silk looks like a very large single fibre—round and solid as sowing cotton. But to reel silk in this way, one of the improved European reels is necessary, and among them, I know of none equal to the 'Piedmontese.' There are several reels in the United States, the operation of which is the same as that of the Piedmontese, but as the latter is attainable in Philadelphia, at about the same cost as the American reels, and as these latter are modifications only, with doubtful improvements, I would recommend the original. Dr. James Mease, of Philadelphia, can give any information as to the persons who make them; I believe the cost is about $20.

To the inquiry as to "the process of softening the silk, how many fibres should be reeled together, what would

such silk be worth in this country and in France," &c.? I reply, that after the silk has been reeled as above described, it should be wound into a ball and partially twisted, (which on a small scale, can be done on a common cotton spinning wheel); it is then to be reeled into convenient skeins or hanks; then to be twisted loosely, as is done with hancks of cotton or wool; they are then to be put into a kettle of very clean rain, river, or soft spring water, in which a quarter of a pound of good country soap to every gallon of water is dissolved, and simmered over the fire for, from thirty minutes to an hour, according to circumstances. To ascertain the proper length of time it should be boiled, the operator must turn the hanks over occasionally and lift one out, and when it has been boiled sufficiently will readily be seen. A tub of perfectly clear rain, or spring cold water, is to be at hand, and as soon as it is boiled enough, the hanks must be taken from the pot and immediately rinsed well in it, after which they may be hung up to dry. When dry, the silk may be wound into bobbins or into balls, and as many of them put together as will make one strand of the thread of silk desired, and twisted, and carried through the process practised in doubling and twisting cotton. Sewing-silk is generally composed of three stands, consequently in the final process of doubling, three are to be combined to make that article. If this silk is to be dyed, it may be done either before or after the doubling and twisting; but if done after the boiling process and before it is doubled, the colour will be more thoroughly diffused through the body of fibres.

Generally about twenty fibres are reeled together; but for sewing-silk from twenty to fifty may be reeled, as the thread must be doubled, even then to make it of the requisite size. A thread of ordinary sewing-silk contains from one hundred to two hundred fibres, the former being very fine, and the latter coarse. If the silk be intended for sale in its raw state,—that is, as it came from the reel, twenty fibres is the highest number that should be combined; and it will he enhanced in value by any decrease in the number of fibres down to five, the latter being the general size of the thread, used in the finest fibrics, and all sizes between 5, and 20, in goods of proportionate quality. But, let me remark, to command a good price,

and, indeed, even a market, the silk must be *well reeled;* that is, it must be reeled as above directed on a proper reel; the number of fibres must be constantly kept the same to secure evenness; the water in the basin must be kept clean to ensure cleanliness of goods; and lastly, the hanks of reeled raw silk must be twisted and folded neatly, to prevent tangling and waste, and packed in small snug bales for market. The hanks should only contain one hundred threads.

The soap to be used should not contain turpentine, but good country hard or soft soap will do.

The value of raw silk depends greatly upon its quality. It will be worth two or three dollars a pound, or eight to ten dollars, according as it has been negligently or skilfully reeled. The best raw silk, composed of three to five fibres, and well reeled, sells in France at eight to twelve dollars a pound. There being no manufactures of goods requiring such silk in this country as yet, it of course would not meet with a market here, except for and at the price of common goods. Raw silk composed of ten to twenty fibres, (the kind used here,) and skilfully reeled, will be worth six to eight dollars a pound, and about the same price in France. But as silk is not generally as well reeled as to make it worth that price, it generally sells in France at from three to four dollars,—like all other things, enhanced or diminished in value by its quality.

GIDEON B. SMITH.

PART II.

SELECTIONS.

ART. XVII—*An Address before the Hampshire, Franklin, and Hampden Agricultural Society, delivered in Greenfield, (Mass.) Oct. 23, 1833; by* HENRY COLMAN.

"The efforts to extend the dominion of man over nature," says Bacon, the great master of Philosophy "is the most healthy and most noble of all ambitions." This admirable sentiment is in nothing more true than in its application to agriculture. Here man exercises dominion over nature; exerts a power more nearly than any other resembling a creative power; commands the earth on which he treads to awaken her mysterious energies; spreads fertility over barrenness; scatters the beauties and glories of the vegetable creation, where before all was desolate; compels the inanimate earth to teem with life; and to impart sustenance and power, health and happiness to the countless multitudes, who hang upon her breast and are dependent on her bounty.

Agriculture is the great interest of every community advanced beyond the savage state. I mean no invidious distinction. The interests of the social body are various; and in proportion to its improved condition its wants are multiplied to an indefinite extent. Many hands and many arts are necessary to erect, support, furnish, light up, adorn the grand superstructure of society, and supply the wants and provide for the entertainment of its innumerable and insatiate guests. The division of labour is one of the most important improvements of civilization, and one of the surest evidences of its advancement. It is essential to the perfection of the arts of life. The humblest occupations are important; and, if useful and honest, are respectable. He who labours with his mind, equally as he who labours with his hands, is a working man. The hardy ploughman who "jocund drives his team a'field," and proudly strokes the smooth coats of his cattle, has no reason to envy the pale and emaciated scholar, pouring till faint with exhaustion over the half formed progeny

of his wearied brain; with eyes scarce open hunting for metaphors by the expiring rays of his midnight lamp: and waiting so long with hope deferred for the gushes of inspiration, that when at last the waters are troubled he has not strength enough left to crawl to the fountain. In the crowded hive of human life, they who build the cell, as well as they "who gather the honey to store it well" are mutually useful and essential. But among the various occupations of society, agriculture obviously holds a commanding rank. If the prince may proudly say "I govern all," and the soldier "I fight for all," and the merchant "I pay all;" the farmer may hold up his head as high as the rest, and with a noble complacency may say, "I feed all." What would become of the operatives, and of what use would be the curious and exquisite machinery of the largest establishment, if the power-wheel should cease its revolutions? Manufactures and commerce, all of science and all of art, all of intellectual as well as physical good, are dependant on agriculture. The agricultural product of one year are not more than sufficient for the consumption of the animal creation until the succeeding harvest pours out its golden treasures. If the husbandman should remit his labours for a single season the human race must perish. What would phylosophy do without bread? Without agriculture the thundering wheels and the buzzing spindles of the manufacturer must cease their gyrations. She too loads the buoyant arks of commerce, and bids them speed their flight to the remotest regions of the earth, and return deeply freighted with the treasures of foreign climes.

Agriculture as a profession begins to occupy the rank among us to which it has a just claim. Some of the most distinguished men in our own and other countries, in the present and past ages, men as eminent for intellectual and moral attainments as for the station which they have occupied in public regard and the part which they have performed in public affairs, have honoured the professions and themselves by engaging even in its humblest labours and details; and have ingeniously confessed that they have found in its calm pursuits an inexhaustible source of interest and recreation, and a more grateful pleasure than the brilliant scenes of public life have afforded. The elements of true dignity of character are integrity, usefulness, activity, and intelligence. This beautiful valley, watered by the beneficient stream, whose name it bears, and fenced in by those magnificent lands, which mark its progress to the ocean, presents in its farming population so many examples of this noble combination, that the profession of agriculture here occupies a front rank among the most useful and respectable.

It is with unfeigned diffidence that I address an assembly of such men on this occasion. Feeling myself, even after years of inquiry and practice in this great art, only a learner, and a com-

parative stranger in this part of the country, I was honestly averse to this duty. I shall attempt nothing more than to offer such hints, as may stimulate the inquiries of others; and should it appear, that I am greatly out of my place, I shall console myself with the reflection, that the responsibility of the appointment rests not with him who accepts, but with those who make it.

The agriculture of the counties under the auspices of this Society is highly respectable; but I trust I shall not give offence, by saying that it admits of great improvements; and by referring to some points to which our efforts for improvement may be directed.

The agricultural population here may be divided into three classes. First those, who, besides cultivating some land, are likewise tradesmen or mechanics; and with their agricultural unite some mechanical or professional pursuit, to which their farming is only secondary. The returns of husbandry are in general so much slower and smaller than those from their art or trade, that the latter is likely to absorb much of their attention to the prejudice of their husbandry. There are eminent exceptions to this remark; and we owe to some of these persons many valuable experiments in agriculture, which their ready capital has furnished them with the means of making under circumstances of great advantage.

The second class is composed of those, who, occupying small farms, look for nothing from their farms beyond the bare support of their families; having other resources, they feel independent of its returns; or devoid of ambition, and indolent and improvident, they are content with the most scanty returns. Ignorant of the art of living, they are in general in the midst of the means of abundance destitute of common comforts; and are satisfied if they obtain, by a little labour inconstantly and indifferently applied, the bare necessaries of life.

The third class comprehends those with whom agriculture is an exclusive profession: who are willing to labour and are seeking the fair rewards of industry. Stimulated by an honest desire of profit, they are anxious to extend their cultivation to the farthest point to which it may be carried to advantage. It is to this latter class, who alone, properly speaking, deserve the name of farmers, that my remarks will be directed.

Farming here consists of three kinds; first, dairy farming; second, grazing, embracing sheep husbandry, and the raising of young stock; and lastly arable farming, including the consumption of the produce on the place by the stall-feeding of cattle, sheep, or swine. There are many farms, which to a certain extent combine these pursuits; but these objects are distinct, and cannot often to any great extent be advantageously prosecuted together.

I. Of dairy husbandry, I shall say little. The art of making cheese is well understood among us; and its quality in general good; but in regard to butter, great improvement is as desirable as it is practicable. Much of that manufactured here is scarcely tolerable. Any person, accustomed to eat the butter brought into the Philadelphia market, must have observed its extraordinary superiority in flavour and richness to the article generally produced among us. What occasions this superiority? There is an advantage in the spring houses of the Pennsylvanians, built stone over some running water, where the milk is always kept, and which is devoted exclusively to dairy purpose. This and the cultivation of white clover in their pastures, the frequent churning, so that the cream is never old, the entire expression of the butter-milk, and the most particular attention to cleanliness in every part of the process, are the probable means of their success. But in these respects there is not a single circumstance in which we might not equal them; and since the difference in the prices of butter between that of the exquisite quality and that of an ordinary kind is more than a hundred per cent., our dairy farmers have sufficient inducements to endeavour to excel. The premiums bestowed for this purpose under the direction of the Massachusetts Agricultural Society have had a highly beneficial effect; and have proved that we are capable of producing as good butter as can be made. Some exhibited on the present occasion fully establishes this assertion. I may remark in this connexion that little attention is paid to our pastures. Plaster and ashes are seldom applied to them, though in most cases without a doubt the application would be highly beneficial; and they are suffered without concern to be overrun with brakes, briars, and that increasing pest the Canada thistle. There is reason to believe too that our dairy farmers pay little attention to ascertain the comparative quality of the milk of their different cows, which in respect to its yield of cream, and of course the amount of butter which may be made from it, must differ very greatly; some yielding milk of the richest quality: and the milk of others being worthless.*

II. In respect to sheep husbandry and the raising of young stock many farms from their rough and mountainous character are adapted solely to these objects. The raising of neat stock, however, beyond the consumption of coarse fodder upon a farm, is not a source of great profit, unless upon land of low price. The

* In a former publication, I have stated a fact coming under my own observation, that in an experiment of milk taken at the same time and placed in the same situation and where the cows have fed in the same manner, the milk of one cow yielded at the rate of one inch and three-tenths of an inch of cream upon nine inches of milk, and that of another cow in same yard produced only two-tenths—in the quality of milk of the two cows for the purpose of making butter, the difference then was 13 to 2.

stall-feeding of beef animals upon hay and meal is likewise a very doubtful source of gain at the average price of hay and grain among us. Few farmers have exactness enough of calculation or experiment whether it does or does not yield a fair compensation for their labour and produce; and the purchasing of cattle for the purpose of stall-feeding, is so much matter of judgment, skill in trade, or mere accident, the thrift of different animals is so different, the state of the market is so precarious, and by the present mode of management the farmer is liable to so many impositions and frauds on the part of dishonest dealers and butchers, that the chance of success is by many judicious farmers considered very small. It were greatly to be wished that some mode or standard could be adopted of selling the animal by live weight on the hoof, to avoid the evils and inconveniences of the present mode, by which the seller is placed entirely at the mercy of the buyer with no security against fraud and with scarcely the possibility of redress.

It is confidently believed that the sheep husbandry, when judiciously pursued, affords far better prospect of gain. It is ascertained, that no husbandry will do more to preserve and improve the condition of a farm; and those farmers, who have steadily persevered in it, even under all the fluctuations through which the prices of wool have passed, have received a full remuneration for their care and expenditure. The great question of comparative advantage between the fine wooled, the medium quality, the long wooled, or our common native sheep, presents a subject involving such various considerations, that the present time does not admit of its discussion. The introduction of fine wooled sheep into the country has been of very great advantage; and though to the serious loss of those persons, who as mere speculators, deluded by most extravagant calculations of profit, paid enormous prices for their flocks; yet to the ultimate and great benefit of those more prudent or more fortunate individuals, who came after them, and reaped the advantage of a reaction in the public estimation of the value of these races of fine wooled sheep, which the heavy disappointments of the first purchasers occasioned. Extreme fineness of fleece is obtained only at the expense of a small and tender carcase. It is confidently hoped that by a judicious combination of the merino with sheep of a larger size a race may be gradually formed yielding wool of a sufficient degree of fineness for the common demand combined with a carcase large enough for the market. Such attempts have already been made with every prospect of success.

III. I pass hastily along to the subject of arable farms. Indeed I can do no more than suggest a few imperfect hints for your consideration, as I fear I may trespass upon the kindness of a portion of my audience, who feel little interest in the humble details of agriculture. Few will deny that the details are pro-

per to the occasion. I need not bespeak the candor of farmers' wives and farmers' daughters, if, indeed, the old race of milk maids and working girls be not wholly extinct; and I may whisper even to the gentlest, the sweetest humbing birds and the most gorgeous butterflies of the fair sex, that they may gather honey from the wildest flowers of the most neglected field. I may crave too that they would not disdain the husbandman's humble toil, since they are not too etherial to be beyond the need of its fruits; I may say more, that love is so wayward, perchance some sturdy ploughman may yet be eligible to the highest honours, which they have to bestow; but let them not be unduly alarmed at an accident of this kind; under his tanned skin, his rough hand and his coarse exterior, there is often found as true a heart and as devoted a duty, as in the most polished beau that ever emerged from a city bandbox.

The territory, embraced under the auspices of this Society, comprehends a great variety of soil; and much of the best arable and meadow land in New-England. Nor is there any extraordinary discouragement here to cultivation; labour is more expensive than in other parts of the country, though it is too high compared with the value of the produce; vast quantities of bread stuff are imported into the country; and whatever grain is raised will for the present command a higher price in cash than the same articles on the sea-board.

There are however some serious obstacles to success. One of the principal is the worn-out character of our lands. They have been so long under cultivation as to become exhausted, and yield small returns to the cultivator. Our crops of Indian corn do not average more than thirty bushels to the acre; of rye not more than twelve; of potatoes not more than two hundred; and of hay, excepting on alluvial lands annually inundated by the river, not more than one and a half ton. These crops are by no means what they might be. Now whether it is owing to too severe a cropping by the repetition of the same crop on the same land without intermission; or too scanty manuring; or to an injudicious cultivation, I shall not presume to decide. In some cases these several causes are combined.

Liberal manuring is the basis of all successful agriculture; and it is folly under any circumstances, excepting the virgin lands of of the West, where there has been for centuries an accumulation of untouched vegetable matter, to disregard the great law of nature, which requires that the soil should be often replenished in order to obtain its products, as much as that the cow, which is daily milked, should be daily fed. Next to liberal manuring a judicious rotation of crops should be followed up; for nature chooses a variety, and scarcely a crop of any kind can be cultivated successively, and without intermission on the same land, without a gradual diminution of the produce. The best advantages may

be expected likewise from that great discovery in agriculture, the renovating influence of clover, which, being sowed with small grain and well plastered, and being afterwards turned under by the plough, will inevitably place the land in a course of improvement. It is questionable with some farmers, whether it is best to plough in the clover the year after its being sown with the stubble of the grain crop; but there is good reason to believe that it is better to suffer the clover to remain one year, and to adopt what is commonly called the three shift system; for example, first corn; then small grain with clover, which is to be well plastered; and then clover to be mowed or fed; and this, where the clover can be advantageously pastured with sheep, will secure the gradual improvement of the land. There are other ameliorating crops; and the ploughing in of green crops in several decisive experiments has been signally successful; but no system can be worse than that sometimes practised, and of which examples may be seen in the beautiful meadows of Hatfield, which operate more effectually to set off by way of contrast other parts of their fine farming; I mean the practice of naked fallows with the hopes that exhausted lands may be recruited by mere rest and weeds.

The next obstacle to improvement is the want of manure. This a serious want. Good crops cannot be obtained without manure, but how to obtain the manure is the difficult question. The first step certainly is the consumption of the produce upon the place. This is pretty generally done; but much of the materials for manure furnished by the crops themselves is most improvidently wasted. This is particularly remarkable in regard to the corn crop, where the buts and husks instead of being carried into the barn and yards to be there used as food or converted into manure as litter, are left to perish in the field, returning comparatively nothing to the earth; and though browsed by cattle, yet yielding under these circumstances nothing deserving consideration. You will pardon me if I speak of such a practice as wasteful and slovenly. Every vegetable product on a farm, which can be used advantageously as food, should be so appropriated; and what will not answer as food should be carefully collected for the purpose of littering the styes, stables, and yards. The great rule should be to gather up the fragments that nothing be lost.

In the next place almost every farm furnishes in some boghole or reservoir valuable materials for compost manure, which if carefully conveyed to the styes and yards to be worked over and made to absorb the liquids which are there floating, will turn to great advantage. The conveyance of common dirt other than sufficient for this absorbing purpose will not pay the labour of transportation; for the manure may as well be mixed with it

in the field as in the barn-yard, and the labour of carting be saved. In some parts of the country, as for example in Bernardston where the soil is cold and hungry, there are extensive depositories of peat-mud, which, where properly managed, and made to undergo a fermentation by the intermixture of horse manure, a process well known to intelligent farmers, and by the discovery of which the name of an English nobleman has been immortalized, will yield a valuable manure, precisely suited to the soils among which it is found.

The agriculture of the country is not yet in a sufficiently advanced state to pay much attention to the saving of liquid manures; as in the best cultivated countries of Europe, where it is considered as the most useful form of applying all animal manures; and where every farm is furnished with the means of preserving and of applying this most powerful stimulus to vegetation. Provision for the same purposes will presently be made among us, when our farmers feel more sensibly, than they now do, the importance of availing themselves of every resource of productiveness and profit, within their reach.

The soiling of animals, that is the keeping them in yards or stables through the whole year, where, when attainable they are fed upon green food daily gathered for their use, is an abundant source of manure; and to a certain extent, as to many of our river towns where pasturage is difficult to be procured, might be practised to the great advantage both of the stock and the owner. Few persons, who have made no experiments and given no attention to the subject, have any proper idea, to what advantage and extent, the produce of a single acre properly cultivated may be applied. I shall make no apology for speaking with so much directness on so homely a subject as that, which we have now treated. It is nothing but a silly affectation of delicacy, which turns with disdain from any of the wonderful processes of nature however humble. The most splendid bouquet, which ever poured out its delicious perfumes on the unsullied bosom of youthful innocence and beauty, is the luxriant offspring of the manure heap; and the cultivated, well-disciplined, and devout mind will contemplate with grateful delight that mysterious operation of divine providence, that signal display of an unsearchable wisdom and goodness, by which every thing in nature becomes subservient to some valuable end; and the most offensive substances are converted into objects and forms of beauty, utility, luxury, and delicious indulgence.

(*To be continued.*)

Art. XVIII.—*Culture of Sugar-Cane in Louisiana.*

[From the Manual on the Cultivation of the Sugar-Cane, and the Fabrication and Refinement of Sugar. Prepared under the direction of the Hon. Secretary of the Treasury, in compliance with a Resolution of the House of Representatives of January 25th, 1830.]

Improvements suggested in the Planting of Cane in Louisiana.—The draining of the land, notwithstanding the importance attached to it in Louisiana, still merits from sugar planters generally, a higher degree of attention than it has received. It is when the drains are sufficiently frequent and deep, and carried far back into the swamps, that the land can be delivered, with the requisite rapidity, of the water from rains, and the filtration which takes place through the banks of the river during the spring, when its level is above that of the land. Unless the land is capable of rapid drainage, it is impossible to deprive it of its coldness and clamminess; both of which are hostile to the early budding of the cane-plants. During the summer, also, it is noticed that cane on land well drained, endures the drought much better on land imperfectly freed of its water; which may be owing to the reason that the surface of badly drained, clayey soils, is compact and hard—which condition prevents the communication of moisture from below upward, in that free and uniform manner that takes place when the upper stratum is more light and open. Besides, in the latter part of the season, the standing of water in the cane-fields tend, in no inconsiderable degree, to weaken the strength of the juice. Imperfect draining also enhances the labour of harvesting.

The value of animal manure, duly mingled with decayed vegetable matter, has not hitherto been duly appreciated. There are few considerable estates where fewer than one hundred head of cattle, including horses and mules, are kept; and yet the economical arrangement of *cattle pens*, where the bagasse and other vegetable matter might be formed into manure, is unknown. This is the more surprising, since in a clayey, impalpable soil, like that of Louisiana, nothing can be of higher importance than the addition of light, imperfectly comminuted, vegetable matter. Ashes and shells would also prove beneficial to the land; although the effects of the latter would be less apparent. The operation of these amendments would obviously be, to keep the soil open and free for the admission of air, and the due evaporation of moisture; conditions of the first importance to the rooting of the plants, and consequently to the growth and maturity of the crop.

The preference so generally expressed for early planting would appear to be extremely well founded in theory; inasmuch as the ground in the autumn is in fine condition for the shooting of the

roots, which, when once thrown out, prepare the plant for an early start in the spring. Besides, upon this plan, much time is saved, which, in the ordinary way, is consumed in forming mattresses, and in the repeated handling of the cane.

In vindication of the mode of thick planting, however, nothing but experience appears capable of being urged; and whether it is clearly established on this basis admits of a doubt. It appears reasonable to expect that the rich soil of the Mississippi will afford a greater weight of cane from the adoption of this system; and that the amount of sugar may be as great, or even greater, may also be true; but that the quantity of water to be evaporated must be abundantly greater in proportion to the weight of the cane, and consequently the labour of harvesting be greatly augmented, would appear equally obvious. When a great number of shoots are encouraged in their growth from a small space of ground, they are of course hindered from spreading their leaves at bottom, they draw each other up to a great height, and are filled with watery juice; the sun and external air being excluded from the stalks, both of which are necessary to ripen and elaborate the sugar during the growth of the canes.

We should be strongly disposed to adopt a system of wider planting; say, in well cultivated lands, five feet apart for the furrows, to lay the canes in the drill in single rows, to prevent them from suckering by the use of the knife, and in this manner to reduce the number of stalks upon a given piece of ground, from one-third to one-half. By thus giving free access to the sun and air, we should expect that the canes would afford a vastly greater yield of sugar; that they would arrive much sooner at maturity; and that the evaporation of the juice would be attended with a great saving of labour and fuel. This method appears at least worthy of trial for a part of the crop; and especially on those estates not infested with nut-grass *(Cyperus hydra.)* Fields planted according to this method, might not withstand so successfully the effects of a severe frost, as those on the common plan; and might require more hoeing and ploughing to keep down grass and weeds, as these also thrive in proportion to light and heat. But a large part of the crop is secured before the access of injurious frosts; and if by adopting this method, the cane could be made to attain an earlier maturity, it might be possible to complete the grinding, more frequently than is at present practicable, without exposure to accident from this source. A cane-field planted in the open manner alluded to, would be in no greater danger from winds than one more thickly planted, inasmuch as the rooting of the canes would be stronger, and the stalks themselves would possess more strength, and thus enable them the more effectually to offer resistance to storms.

Although the most successful sugar planters testify in favour of planting with rattoon canes, and not with succulent plant

canes and tops, still the latter practice is very general. To say the least, this system is not countenanced by experience in other branches of agriculture; for it is well known, that it is by carefully propagating all kinds of esculent plants, either in the choice of the best seeds or cuttings, that most of the species have been so greatly improved. By planting the lower part of well ripened canes, less luxuriant shoots would no doubt be obtained; but their juice would be less crude, and more rich in saccharine matter, while, at the same time, the sugar would be obtained by less boiling than that of the canes, reared in the manner in which they are commonly planted.

In ploughing the land for planting, it is important to turn up the surface completely, unless it be in new land; the practice of merely running a furrow between the old rows, is liable to be attended with the loss of many canes, from the flowing in of water, which rots the plants.

When it is impossible to plant land in the autumn, it is attended with a decided advantage to plough up the soil as early as possible, in order that it may remain exposed to the effects of frost and rains, till the planting can be done.

In ploughing the cane-fields at the season of hoeing, it is advisable not to plough deep, especially for the last hoeing, or *hilling*, as it is called; for there is great danger of disturbing the roots, which, by the time the cane is twenty or twenty-four inches high, extend into the alleys.

Against the practice of cutting down the cane when killed by frost, to preserve it the longer for grinding, no objection can be urged; it should not be resorted to, however, prematurely: for if cut down when green, its buds will be liable to swell; but if the top leaves are killed, and the uppermost buds injured, it will still be prudent to let it stand for several days, until vegetation is seen to be entirely checked in the lower joints, after which it may be cut.

It is strongly to be hoped that some variety of the sugar-cane will yet be produced, that shall suit the exigencies of the climate. That either of the present varieties will fully answer the requition, is at least doubtful. Numerous observations go to prove, that each variety of plants, in consequence of a structure which no artificial treatment can affect, is capable of supporting only a limited temperature. De Candolle does not allow that plants coming from seed produced in countries into which the plants have been introduced, are more hardy than those derived from seeds brought from the country in which they are indigenous. But it is a well known fact, that culture gives rise to varieties which never did, nor never can exist, in a state of nature; and which possesses, in the structure of their tissues, unequal degrees of susceptibility to temperature. Such varieties, are all hybrids of other varieties. In this way, potatoes have been ob-

tained, whose entire vegetation occupies only three months; and olives, which sustain a severer cold than those of France. The artificial culture in the United States, of all the varieties of the cane, is, therefore, deserving of the greatest attention; and if judiciously persevered in, hold out ample encouragement that varieties will eventually be produced, perfectly adapted to the climate of the Southern States.

The preservation of cane in mattresses is attended with little difficulty, provided the precaution be taken of placing the canes flat on the ground, which should be scraped smooth for their reception; laying the buts of the canes as nearly as possible to the north-west, in order to prevent the cold wind from that quarter from penetrating the bed. It has been found useful, also, to make the bed as flat as possible, that each cane may be nearly in contact with the earth.

In planting the canes, care should be taken to lay the eyes towards the sides of the drills; and to avoid placing them so that the eyes shall be alternately up and down. This attention will demand more time, but it will ensure the canes being placed at proper distances from each other, and greatly promote the shooting of the eyes; since, when the canes are not placed in the way here recommended, those buds which are uppermost, occasionally perish from frost, while those underneath have an unnecessary resistance to encounter in shooting downwards, and curving round to gain the upright position, in effecting which, a very slight obstacle causes them to fail altogether.

In concluding this part of the subject, it may not be unsuitable to introduce a few remarks upon the transportation of cane to the mill. The carting of cane with oxen, horses and mules in the ordinary way, is felt to be the most severe and onerous operation of the cane crop, on account of the great bulk and weight of the canes and the heaviness of the roads during the rains. With a view to remedy this inconvenience, Madam Poeyferré has, at the recommendation of Mr. Edmond Forstall, caused a permanent rail to be laid down through the centre of her plantation; the land on each side being 3½ acres wide. The iron rails are in 12 feet pieces, each weighing 56 pounds. They are fitted to the most obtuse angle of timbers formed from sawing, diagonally, 6 inch cypress scantling. This rail is to be furnished with 6 acres of moveable rail; the iron projecting beyond the wood at one end of the 12 foot pieces and the wood at the other, so that when laid down, the iron rails meet; its use will be to bring in the canes from either side, to the permanent rail. Forty-two arpents of the permanent rail were in operation the last season; the convenience of which, not only in bringing in the cane, but also in delivering the wood from the swamp at the sugar-house, was found to be very great. It cost $100 per arpent. The expense of the moveable rail will not exceed $70 the arpent.

This is, unquestionably, a capital improvement in the management of sugar estates in Louisiana; but it is highly deserving of attention, whether a cheaper construction, would not equally answer the purpose. Mr. J. H. Couper, of Georgia, employs a moveable rail, wholly constructed of wood; of which he is able too lay down more than a mile and a half. The cross pieces are 4 feet apart, over which the horses, in drawing the cars, soon learn to step, without the least embarrassment. He informs us that its cost is not above $100 the mile.

Culture of the Sugar Cane in Georgia and East Florida.—The difference in the culture of the cane between these regions and Louisiana, arises chiefly out of soil. The lands upon which the cane is here cultivated are either *tide swamp*, *inland swamp*, or *hammocks*. The tide swamp land is situated directly upon rivers, and is drained by the construction of a bank, or levy, and the excavation of a large canal, through the centre of any considerable tract, say from 400 to 1000 acres, which often runs back a mile or more from the river. The canal is connected with the river by lock gates adapted to the passing of flat boats at the highest stages of the tide, and it serves also for draining of the land situated far back from the river. Other considerable ditches also occur at various distances, upon a plantation of swamp-tide land, each having its gate for communication with the river. So low and flat are these lands, that they are capable of being laid under water, at particular stages of every tide, which eminently fits them for the rice-culture, to which they are chiefly devoted. They are, however, to some extent, devoted to the cane, which is planted in rotation with cotton and rice. The inland swamp constitutes tracts from 100 to several thousand acres, situated at low levels, completely environed with pine lands, excepting an outlet to some river or small stream. It is drained with some considerable difficulty, by deepening the outlet and intersecting the swamp with ditches. The third class of cane land is formed by what are called *hammocks*. These are situated between the swamp and the pine-lands, forming belts or borders of various degrees of thickness, and characterized by the natural growth of large evergreen oaks, hickory, red bay, magnolia, and cabbage-palmetto. The soil is, in some measure, intermediate between that of the swamp and pine lands, but nevertheless abounds with a dark vegetable mould.

The mode of planting in this region differs somewhat from that of Louisiana; inasmuch as the softness of the swamp land prevents the free use of the plough: the hoe is therefore, of necessity, more extensively employed in the working of such land. The canes, are, moreover, planted in rows wider apart, and the cuttings are less numerous in the row. But a difference still more remarkable arises out of the use of manures. Vegetable

and animal manures are introduced so as to form beds, after the manner adopted in cotton planting, the canes being planted in a drill upon the top of the beds. They construct their mattresses of seed cane also in a manner different from the Louisiana planters. The cane is thrown into windrows in the alleys, two rows forming a windrow, where, after wilting for two or three days, is covered four or five inches deep with dirt.

The failure of rattoons in Georgia is very common; in consequence of which, they are rarely suffered to run above one year; and on rice land, where the cane is employed for the purpose of procuring a rotation of crops, it is rarely suffered to rattoon at all. The red ribbon variety is in the most extensive use; although in Florida they employ the creole and Otaheite to the same or even greater extent than it is used in Louisiana.

Remarks and Suggestions in Relation to the Cane Planting in Georgia and East Florida.—In advancing suggestions for the benefit of sugar planters of this district, perhaps nothing, so well worthy of consideration, can be presented as the remarks of Mr. Jas. H. Couper, of Hopeton, whose scientific attainments and experience in planting, eminently qualify him for treating the subject. In an unpublished memoir, from which he obligingly permitted us to make extracts, he says, "It is believed that the cane can be cultivated, profitably, on the sea-board of Georgia, in rich lands which can be well drained. To ensure success, such an apparatus must be procured, and such facilities for harvesting provided, as to take off the crop between the 1st of November and the 15th of December. It will be unsafe to calculate on a longer grinding season. To enable the planter to accomplish this, he should not plant more than half his crop in cane. This will enable him to apply a double force to the harvesting of the cane crop, prevent his land being exhausted by the continual succession of the same crop, and facilitate all his operations during the year.

"Under the circumstances above mentioned, it is believed that the cane crop will, on an average of several years, be more profitable than either cotton or rice: but enormous profits are not to be expected from it in this climate. The chief value is, in offering a third plant yielding a rich return, to be combined with rice and cotton; thus extending the system of rotatation another year.

"The cane crop, being in a great measure exempt from the fatal effects of fall gales, gives a very desirable security to the planter against a total loss of crops, should they occur.

"The investment of capital in machinery is not greater for cane than for rice, when the latter is pounded on the plantation: it is, however, far greater than for cotton; and this circumstance should operate against any attempt to enter into the cultivation

of the cane except on a scale of 100 to 200 acres, and under the advantages of rich soil and efficient drainage. If undertaken on a small scale, without sufficient machinery and without adequate preparation for transportation, failure may be expected as the certain result, and accompanied with a great waste and expenditure of labour."

It is deserving of trial whether rattoons of two years cannot be made to grow in Georgia with the same advantage as in Louisiana, by observing the precaution to run a furrow in autumn along upon the sides of the rows so as to bury the buds which are nearest to the surface, and in this way to defend them from the severest frosts, by which they ssem more liable to receive injury, on account of the lightness of the soils.

In preparing inland swamps for the cane, complaint is often made of the acidity or sourness of the land; a condition which depends upon the incomplete decomposition of the vegetable matter it contains. The most speedy remedy for such soil consists in opening it to the sun, by effectual ditching and burning, and by the addition of a dressing of ashes, or quicklime.

We shall add still farther, from the directions of Mr. Couper. "If the field has been planted the previous year in cotton, the cotton beds are shaved down into the alleys, covering the trash, &c. and forming a wide list. In performing this operation, care must be taken that the earth over the vegetable list is sufficiently deep to afford a moist and close foundation, for the cane planted may otherwise from a deficiency of moisture, or the access of the air, take the dry rot.

"The canes should be cut in short pieces, so as never to exceed 3½ feet, as the buds which come forward first, monopolize the whole sap." "Another reason for planting the cane in short pieces is, that, sometimes, from the action of moisture and heat, the canes bend, if in long pieces, and the extremities are lifted out of the ground, and so prevented from budding."

Mr. Couper says that plants should not be covered above 1 or 1½ inches, and that the closeness is more important than the depth of the covering. On friable, clay lands, he has found half an inch sufficiently deep, even in the coldest winter. The prevalent error, he believes to be, in covering too deep. When the soil is wet and the planting is deep, they are very liable to rot. His four requisites, in planting, are the following: 1. Have the soil well drained and in fine tilth; 2. sound seed; 3. light but careful covering, closely pressed to the canes; 4. placing the canes an inch or two below the level of the land, so as to insure the lower sides being in close contact with a moist but not wet soil. Mr. Couper says, the earlier the operation of planting is performed, the better, as the canes are safe when planted; they are slowly throwing out roots during winter to support the shoots

in the spring; the soil is more moist, and therefore better adapted to receive the plants in winter than in spring, and the buds being then undeveloped, there is no risk of breaking off the shoots of which there will be danger, if the planting is postponed until spring.

Of the comparative value of the different kinds of lands in Georgia and East Florida for the cane, it may be remarked, that the hammock lands are the best. They are lighter, warmer and drier, and afford to the cane a much more perfect maturity. The sugar they yield is superior to any produced in the United States, and approaches very closely to the best samples from the West-Indies. That from inland swamps, and tide swamps is softer grains, and frees itself less perfectly from molasses, of which it affords a much greater proportionate yield.

One of the earliest cultivators of sugar in this part of the United States, Mr. Thomas Spalding, of Sapello Island, who, upon the subject under consideration, has communicated a number of highly interesting articles to the Southern Agriculturists, remarking upon this point, in one of his papers, says:—"The alluvion soils of the river, or the lower grounds upon creeks will, no doubt, produce a much superior growth of cane; from which, however, it is more difficult to make the sugar, and the sugar of which is always inferior. Every day's experience satisfies me that lighter soils will in the end be more profitable, while they are certainly cultivated with less labour to men and animals, than those of a heavier quality. If, however, river lands, or low land of any description are selected, upon such I would unquestionably plant the ribbon cane; because on these soils, the juices are more abundant, than upon lighter lands, which removes one of the material objections to this cane; and its ripening in the month of October, enables the cultivator to get off a great portion of his crop."

(*To be continued.*)

Art. XIX.—*On the Culture of Cotton; by* A Cotton Planter.

[from the louisiana register.]

Many who cultivate this most valuable article, are, I find, wrapped in darkness respecting the management of it. Many who cultivate this valuable plant, manage the planting and till-

ing in such a manner as will not nett them any thing; whilst there are others within my knowledge, who sink money at the business. But when rightly managed, it is certainly a lucrative crop.

In making the cotton ridges, it is of vital importance to plough deep, and throw the furrows up close, and the ridge should be made early, in order that they may settle before planting. I have seen many farmers that have lost greatly by not setting their ploughs to work early in the season. Procrastination is the cause of failure in many instances, but in none more surely than in this.

If the ridges are not well settled when the seed is put in, the farmer will either have to plough it up again, or replant. The former will throw him very much behind hand in planting, and the cotton, unless it is very much favoured in the fall with a late season, will not mature before it is nipped by the frost; the inevitable consequence will be considerable loss. As to the latter, reason itself teaches that the older will shade that which is replanted, and deprive it of its due and necessary share of warmth and nourishment. There should be a very small furrow run on the ridge to plant in, and a very light harrow to cover it with, as it is a seed which is sure to rot when covered deep. When up, it should be scraped as soon as the third leaf makes its appearance. The director or overseer should be present most of his time, to see that the ridge is well scraped; not a particle of the ridge should be left unscraped. I have seen fields of cotton literally lost by this one piece of negligence; they would suffer the workers to leave a small tuft of grass among the cotton, and before it is time to work it again, the grass is towering above the cotton; consequently the cotton is materially damaged. The next thing to be done to cotton after scraping, all know to be moulding and hilling. The best plan, I find, is not to have a high ridge; it is not only more apt to retain its shape, but grows larger. I have seen some farmers hill their cotton so high that it would be equal to a potatoe ridge; consequently when there comes a rain, which is most commonly needed in the summer, the water runs directly to the middle, without penetrating the ridge.

Ploughs should be kept going until it is very large, for whenever the ploughs are stopped, the cotton ceases to grow. I recommend topping in August, when cotton is large.

A COTTON PLANTER.

Art. XX.—*Use of Cotton in Dressing Wounds.*

[FROM SILLIMAN'S AMERICAN JOURNAL.]

Dr. Peschier, Secretary of the Medical Society of Geneva, (Switzerland,) in a letter addressed to the Editors of the Bibliotheque Universelle, states that he has proved with entire satisfaction to himself, that the general opinion of the unfitness of cotton for the purpose of dressing wounds, is altogether an unfounded prejudice, and that carded cotton, employed either as lint or as bandages, is in fact preferable to linen. He does not pretend to be the discoverer of this fact, but refers it to an incidental circumstance which occurred in America. A child which had been most severely burned, was laid upon a heap of carded cotton, while the person who first rescued the child went for assistance. On returning, instead of finding it in agony, it was fast asleep; and the wounds, though deep, healed rapidly, with no other application than the soft cotton, which they did not venture to detach. It is, Dr. P. remarks, in the most desperate cases, that cotton is the most useful in burns. When the skin and even the flesh, has been shrivelled and roasted with the heat, the application of cotton has been found to promote the sloughing and suppuration without too much pain, thus preserving the life of the patient, otherwise so doubtful under circumstances of this nature.

Dr. Peschier cites the following cases, which came under his own notice. Two artillery men, in charging a cannon too hastily, had their hands and faces so severely burned by a sudden deflagration of the cartridge, that the epidermis was separated. The injured parts were immediately covered with cotton, and so successful was the application, that although the hands, and especially the face, were prodigiously swelled, the eyelids tumefied, and the nostrils obstructed, the wounds healed so perfectly, that not a trace was left of the accident.

So much for burns. A family of five persons were attacked with typhus, which reduced them to great extremity. They recovered, but one of them, a lad of twelve years of age, became a prey to enormous eschars, on all the parts of his body, which were obliged to sustain any pressure, or even a permanent contact; that on the sacrum was at least six inches in diameter, those of the trochanters, were the one five, and the other four inches, and on each knee was one of two inches, with smaller ones on the feet. The young man was reduced to the lowest degree of emaciation, and so great was the pain that his cries were almost incessant day and night for nearly a month. After trying in vain the ordinary means, Dr. P. thought of carded cotton, and of this he applied a thick compress on each wound.

On the first night after, the patient slept, the pains abated as if by enchantment, the application was continued, and in the month of February, the eschars, which had commenced in September preceding, were reduced to very small simple wounds, and the patient had regained his strength, notwithstanding the enormous suppuration.

The precaution which was observed in this important case, and which Dr. P. considers indispensable to success, was never to change the compress of cotton, except when the amount of suppuration incommoded the patient and almost entirely detached the mass. In dressing, also, great care must be taken to cut with good scissors, and never to pull out the fibres of cotton which adhere to the borders of the wound.

Such unexpected success induced the belief that every kind of wound or ulcer might be treated with decided advantage by dry carded cotton. An opportunity of trying it was soon presented. An unfortunate being, with an enormous cancer of the face, was dressed with cotton, without experiencing from it the least pain. The disease being in its nature incurable, Dr. P. did not pretend to heal it by this means, but he rendered the treatment of it far more supportable.

All kinds of wounds, simple and complicated, have been thus kindly and promptly healed. A wound of the head, complicated with much hemorrhage, was by the same means successfully treated. A prejudice exists that cotton is dangerous to the eyes, but Dr. P. states that he had speedily cured a man who, by falling on some stones, had received a severe contusion of the face, a corner of one of the stones having penetrated and torn the flesh.

Obstinate scrofulous ulcers have been treated in the same manner, with no less success.

"I cite these facts, (observes Dr. Peschier,) only to demonstrate that cotton is applicable, indiscriminately, to all kinds of wounds and ulcers, and that far from being, (as it is unjustly regarded,) *poisonous*, that is to say, *irritating*, it furnishes, on the contrary, a material for dressing wounds, of the softest and most pleasant kind. But, I repeat, it is indispensable to success, that the dressings be rare, and that the threads be never pulled or torn from the wound, a practice which cannot fail to increase either its extent or aggravation. The scissors lightly handled, must be used to separate from the adhering fibres, the mass, which may be safely detached.

"I would be the first to admit that there is very little scientific merit in substituting cotton for lint; but I deem it to be rendering an important service to the wounded, to their connexions, and especially to the attendants at civil and military hospitals, to convince them that they need not be uneasy at the difficulty of procuring lint, a substance not always easy to preserve,—which

becomes easily infected with miasmata, and which cannot be kept in large masses without some danger. Carded cotton is found every where; it is of trifling value, so that the rich will at no time refuse to buy it for the poor, and hospitals can be at all times well provided with it.

"The same remarks apply to cotton cloth. It is of trifling cost, even when of the finest kind; it has precisely the degree of supleness which fits it for bandages and compresses; it occupies vastly less space in travelling chests than linen or hemp, and it may be any where abundantly obtained."—*Bib. Univ. Mars*, 1831.

Art. XXI.—*Influence of the Stock on Grafted Fruit.*

[FROM THE GENESEE FARMER.]

It has been a question whether the stock has an influence on the fruit of the grafted tree, so as to alter its shape, colour, or quality, and render it different from the fruit of another graft of the same *variety*, set on a different kind of stock? We have been almost intuitively led to take the *negative*, though perhaps from the circumstance that myriads of trees are annually budded or grafted; and that the most intelligent cultivators procure them, excepting the fruit to come *true* to its kind. If disappointment had occurred, other means of propagating might have been employed. The pear, the apple, the cherry, and the plum, can be readily increased by sub-division of the roots, when the young tree would be entire, free from any connexion with stocks of doubtful character, and subject to no kind of variation whatever. But it appears that no such measure has been neceseary. None have been stimulated to invent a better way to increase the peach and the nectarine; and all seem to be satisfied; except a few individuals whose opinions we shall notice.

On the *affirmative* side of this question, has appeared our eminent countryman, Dr. Mease; and in an elaborate article,* including some fifteen or twenty cases, he has embodied the strongest evidence that we have seen on the subject. It is not

* New-England Farmer, Vol. xi. page 97.

our intention to open a controversy, much less to call in question the authenticity of his facts; but notwithstanding, we must think that a few remarks may place the matter in a broader light.

The influence of the stock on the graft may be considered in three different points of view:

1. If the stock stands in a sterile or unfavorable soil;—if it is constitutionally diseased; or if it is mechanically injured;—the graft must suffer with the stock; but not more than it would suffer without the stock, if standing on its own roots under such circumstances; and therefore such cases cannot come within the meaning of our leading question or inquiry. Of this class, are those marked by Dr. Mease, No. 2, relative to a spotted passion-tree, which by budding communicated the disease to a healthy stock; and No. 3, relating to a scion from an old stunted tree which revived by grafting into a more vigourous plant. These cases appear to us to be quite extraneous; and if the cause of the bitter rot in the Vandevere apple, is a constitutional disease as we supect, then that case ought also to be excluded from the evidence.

2. If the stock is not entirely congenial with the graft, there will be some obstruction at the junction between the two; and the effect of this will be to increase the fruitfulness of the tree, on the same principle that a ligature of wire, or the removal of a ring of bark,—increases it. We must therefore also exclude, as not coming within the meaning of our inquiry, four more of the cases produced by Dr. Mease, and which we will briefly enumerate:

No. 5 is from President Knight, showing that peach trees on plum stocks dilate at the base, &c. No. 6 proving that pear trees are more productive on quince stocks. No. 8 showing that almond trees bear best on plum stocks. No. 14 showing from G. Lindley, the use of different stocks to render grafted trees more productive.

No. 11 is also extraneous, though not coming strictly within this class. It shows from Darwin that two stunted and cankered pear trees were renovated by setting healthy grafts on the tops; and which *Darwin* properly remarks, "can only be explained from a better sanguification produced in the leaves of the new buds." We have seen trees continue stunted for years, until at last leading shoots protruded, operating like the scions on the pear trees, but without the process of grafting. Trees in this torpid state are sometimes invigorated by *heading down.*

3. Whether the stock changes the form, colour, or flavour of the fruit, is the inquiry before us; and the remaining instances, cited by Dr. Mease, present a formidable array, well worthy of deep consideration. We might have been induced to adopt the

inferences drawn on that side of the question, were they not opposed as well by the facts noticed near the beginning of our article as by other considerations of great weight, to which we shall now advert.

Professor Lindley, in his directions "to cause fruitfulness,"* says, "a great increase of fertility is the result of grafting pears upon quinces, peaches upon plums, apples upon white thorn and the like. In these latter cases, the food absorbed from the earth by the root of the stock, is communicated slowly and unwillingly to the scion; under no circumstances is the communication between the one and the other, as free and perfect as if their natures had been more nearly the same; the sap is impeded in its ascent, and the proper juices are impeaded in their descent, whence arises that accumulation of secretion which is sure to be attended by increased fertility. No other influence than this can be exercised by the [stock] upon the [scion.] Those who fancy that the contrary takes place; that the quince for instance, communicates some portion of its austerity to the pear, can scarcely have considered the question physiologically, or they would have seen that the whole of the food communicated from the alburnum of the quince to that of the pear, is in nearly the same state as when it entered the roots of the former. Whatever elaboration it undergoes, must necessarily take place in the foliage of the pear; where far from the influence of the quince, secretions natural to the variety, go on with no more interruption than if the quince formed no part of the system of the individual."

We think nothing can be clearer or more conclusive in a theoretical view than this passage; but notwithstanding, we remember the old adage, "facts are stubborn things." There is one consideration however, which writers opposed to us, appear to have overlooked. If the stock operates on the fruit of the graft in the sense required by us, its action must be every year alike; and if the fruit be changed by it in one season, the same effect must be produced in every succeeding season. The stock, devoid of leaves and branches is less exposed to vicissitudes and incipient diseases than any other part of the tree; and the action being regular, the effect should be the same. Now in the instances given, has this been the case? The respected proprietor of the Linnæan Garden at Flushing, mentioned that peach trees on almond stocks, had *oval* fruit, when the same kind on peach stocks was *round*. He has not said that this difference ever occured but once. If it did not, or if only occurred irregularly, the bearing of that fact on the argument is neutralized.

It is possible that particular stocks may exercise a peculiar influence; and some persons from this cause may have had opportunities for observation which never occur to others. We

* Guide to the Orchard and Fruit Garden.

are, therefore, unwilling to call in question the information received by Dr. Mease, at New-York, respecting the variable qualities of the Spitzenburg apple; but we have many grafted trees of this kind; and the stocks on which they stand are all seedlings; consequently no two alike; yet we have not discovered any difference in the flavour of the fruit, except what is undoubtedly due to other causes.

Our object in calling up this subject, is to have it more closely examined. The appearances of fruit are very anomalous; and if we search for causes it is desirable to find the right one. We have seen a published notice of pears growing on on a Spitzenburg apple tree that were *redder*, and *sourer*, and more *astringent* than the same kind of pears which grew on pear stocks; but we are assured that in three succeeding years nothing of the kind could be observed; the fruit being as *yellow*, as *sweet*, and as *pleasant* as that on the other trees. We will mention another anomoly. Last summer our Washington plums (on one tree) were red, not deeply coloured, though truly splended. We never saw them so before, nor are they so in the present season. Neither of those siugular cases can therefore with any propriety be ascribed to the influence of the stock.

Art. XXII.—*Use of the Tomato in quickening the action of the abdominal vicera*

[FROM THE NEW-YORK FARMER.]

Mr. Fleet,—Like most persons of studious or sedentary habits I often am more or less incommoded, and my health impaired, by inaction of the stomach and bowels, so as to be under the necessity of resorting to medicine, principally cathartics. In order to enable your readers perfectly to appreciate what I am about to say of a remedy, this state of the bowels is always in a degree accompanied with a sense of straightness of the chest, and besides a general uneasiness and lassitude, yet with the head-ache, or some degree of pain in the region of the liver. It seems to me a recurrence of those symptoms that accompany attacks of what is called, by my physicians, a liver complaint, to

which I have been a good deal subject. The appetite, instead of being keen, becomes imperfect, with a peculiar taste of the mouth, as if something was wanting, and in the functions of digestion, to constitute perfect health, for which cathartics are only a temporary relief not a remedy.

The common *Tomato*, used in making gravy, at once removes this taste of the mouth; in a little time quickens the action of the liver and of the bowels, and removes all the above noticed symptoms and feelings. I regard it as an invaluable article of diet, or, if you please, as of medicine, or of medical dietetics. With me it has always been my object of solicitude, to find out such diet, as should supersede the necessity of medicine. Except in pickle, which I cannot use, I eat the tomato in every imaginable mode of dressing, and find it perfectly adapted to my wants. In the hope of being of some use to others, these facts are stated. The tomato is of great use to me. It is raised with less trouble than any other vegetable that I have any knowledge of. It was first planted six years ago, drops its own seed into the ground, and has produced bushels, every year since, with no other trouble than once digging the same ground, in spring, and one or two hoeings on a spot of perhaps six feet square. It makes a good pickle, and is raised with one hundreth part the usual labour and trouble, of an equal quantity of cucumbers. But, one other object remains to be stated. I incline to the opinion, though without having yet fully tried it, that the tomato may be made into a rich sauce, for meat, and be kept through the year, or from season to season of the fruit.* The gravy, I know, even in the hottest weather of summer, will keep perfectly unchanged for several days in a common open dish, in a pantry; and this I know, because, as my cook does not like the article, I have contrived to keep it over, when she neglects my directions. If properly prepared, and bottled, and well corked, it would certainly keep good, in an ice house, or perhaps in a common cellar, under water, of a low and uniform temperature. At any rate, if found to be as useful to others, as it is to me, it will be quite desirable to find out how it may be best preserved for use. As a pickle kept in brine, or vinegar, I could not use it, and I am inclined to think that its good qualities would be much diminished, for any one, by this mode of preservation. It seems to me, that, of all the articles of diet, or medicine, that have come to my knowledge, the tomato acts most directly upon the liver, and thus in the bile. Publish this if you please, and let others try it, and make their own observations. I know that several persons of my acquaintance, have derived a like benefit from the use of it.

* French cooks have a method of preserving them in the form of cakes, first having cut them into small pieces, or ground into powder.

Constitutionally predisposed to a torper of the liver, and the abdominal viscera, I have, through life, been subject to the necessity of using cathartics, until having discovered the good effects of the tomato. In all cases, except in such above described, my flow of animal spirits have always been uniform, rather abundant than otherwise, sustaining severe mental effort, even to 12 and 16 hours each 24, for weeks in succession, always without other stimuli than ordinary food and drink. Wine never exhilarates, except as it increases my general health; and ardent spirits always depresses the tone of my mind. How far they may be regarded as peculiarities, I know not, but think proper to state them, for the sake of a clear understanding, and in a sincere desire to be useful to others. I have never known the effect, even in the slightest degree, or any sort of intoxicating drinks. Health exhilarates, and ailments depress my spirits. When afflicted with inaction of the bowels, headache, a bad taste of the mouth, straitnesss of the chest, and a dull painful heaviness of the region of the liver, the whole of these symptoms are removed by tomato sauce, and the mind, in the course of some few hours, is put into perfect tone, like a new violin. The facts certainly merit a narrration, and I can but hope they may be of use to many persons. The true plan of life for men of mind, and especially for men of study, and much mental effort, is so to live, as to have our food supply all that is necessary of medicine. A wise man will soon learn to relish what agrees with his temperament, and reject all else in food and drink. To which I will only add, that much employment of the mind, particularly in men of slow habits of the body, slow actions of the bowels, calls for a larger proportion, than they generally use, if temperate men, of liquid food or drink.

Art. XXIII.—*Important to Rice Planters.*

[from the georgetown union.]

There is nothing which fills the rice planter with greater and with juster apprehensions for the safety of his crop, than the frailty of his embankments. Indeed, on their account he must necessarily be anxious, until he beholds the produce of his toil

harvested and safely placed within the enclosure of his barn yard.

Hitherto no provision has been very successfully made against the encroachments of many enemies by which his banks were liable to be assailed. The insect works its way through them and opens a thousand subterraneous passages for the water: The continual sapping of the waves, washes and carries away the easily yielding earth. The freshet comes down against them with its impetuous force, carrying all before it, while the gale, assisted by the tide, often finishes the work of destruction.—Several times, within a few years, have we seen beautiful fields, just ready for the sickle, and promising a golden reward for the labourer's toil, entirely ruined by inundation. Nor is this all: To keep up the banks, those especially on the river side, require continual labuor. Often many hands, poorly to be dispensed with, at seasons when the grass is overrunning the fields, must be taken from the hoe, and employed in flatting, not unfrequently from a considerable distance, the material by which a breach may be stopped. Any plan therefore, by which these great evils to the planter may be obviated, cannot fail to be received with pleasure, and we think we can present one which, in an eminent degree, will fulfil all the purposes desired.

We have lately had occasion to visit Oak-Hill, *now* a beautiful plantation about seven miles from this town, on the east side of the Waccamaw River, and under the agency of Mr, Samuel Fraser. At this place the banks have been nearly ruined by the causes above alluded to. The strips of land bordering on the outer banks had been nearly all dug away to furnish earth by way of repairs; thus presenting considerable parts of them to the action of the waves. Piles, usually had recourse to, in these emergencies, had been resorted to; but they had afforded but temporary assistance—in short, every expedient usually put in practice, had been tried by this ingenious and indefatigable planter, in vain, except that of wharfing, and it was between this very laborious method, and the one which suggested itself to his mind, that he was left to make up his choice. He adopted the latter, and it is the business of this article to describe it for the use and benefit of others similarly situated. We pretend of course to no experience, in matters of this kind, but we are much mistaken, if the strength, durability and efficiency of the method of Mr. Fraser, will not be found equal to its great simplicity and ease of construction. In order to convey as distinct an idea as possible of the work, we may mention that it consists, first, of a frame, secondly of planking. This frame is formed by sinking a heavy piece of squared timber, close to the outer side of the bank, and parallel therewith, to the depth of a foot or more. From this timber pieces from 6 to 8 feet apart, according to the greater, or less

strength required, of about 8 or 10 feet in length, project at right angles, towards the river, and also sunk into the earth to the same depth, at the ends of these latter pieces, caps are affixed about four feet long, parallel to the bank and against which, for additional security, piles are driven in an inclined direction. This done, upright pieces, or rather pieces sufficiently inclined towards the bank, and opposite to each projecting piece above mentioned, are let into the main timber next the bank; finally the frame is completed by placing strong braces between the uprights and the projecting pieces already described.

The second part of planking is done by attaching to the upright, on the bank side, plank of about 2½ to 3 inches in thickness by means of pins: The planking is carried up from the sunken timber, to a little above the bank, or as high as occasion may require. After this the earth is jambed in against the work and the whole is finished.

From the whole appearance of the work which came under our observation, we were impressed with the idea that the plan thus put in practice by Mr. Fraser is far superior to that of wharfing, whilst at the same time it can be resorted to with far greater expedition and facility. Wharfing* to any considerable distance is a herculean business, and accordingly it is only in very exposed situations that we find it had recourse to. On the other hand the method above described can be used throughout whole lines of banks, and by being made to protect those flanking the river on the higher plantations for instance, on Pee Dee and Santee, we have not a doubt that the crops in those neighbourhoods would be rendered entirely secure from the inundation of the freshets, to which every year they are more or less liable. Mr. Fraser informs us, that three sawyers could get out plank and stuff enough in two months, for 500 feet, (little less than the eighth of a mile,) and that the same number of men could put it up in a fortnight.

It may be some recommendation of Mr. Fraser's new plan to state, that a very intelligent and experienced planter on Sandy Island is about to be put it into immediate use.

* We have lately seen some wharfing, which when first put up, had all the appearance of strength and durability. It is now, however, falling to decay, or rather it is tumbling down. In the nature of things, wharfing, as at present constructed must be of but temporary use. Every dash of a wave enters the crevices and brings away more or less of the earth against which the whole structure rests; thus in a little time the banks are made to sink and crumble away, and new clay, to much cost and labour, is to be brought to fill up the space. The plan of Mr. Fraser, we think, obviates all these difficulties.

PAGINATION INCORRECT

PART III.

MISCELLANEOUS INTELLIGENCE.

Premium for the best mode of Preparing Cotton.—The St. Andrew's Agricultural Society have offered a premium of *Fifty Dollars* for the best mode of preparing cotton. The conditions of which were stated in our last number,—to which we refer.

Useful Instructions regarding the Milking of Cows.—The operation of milking is performed differently in various parts of the country. In some, the dairy maid dips her hand into a little milk, and by successively stripping the teat between her finger and thumb, unloads the udder. The plan, however, is attended with the disadvantage of irritating more or less the teat, and rendering it liable to cracks and chaps, which are followed by inflammation, extending to the rest of the quarter. This accounts for the disease occurring more frequently among the cows under the charge of one milker than it does in those which are under the charge of another; and, as this practice is more common in some parts of the country than in others, it also accounts for the disease being more common in these parts. This plan of milking, where the irritation is not sufficient to excite the extent of inflammation to which I have alluded, frequently produces a horny thickening of the teat, a consequence of the cracks and chaps, which renders it more difficult to milk than when in its natural state; and, at the same time, predisposes to inflammation, when any case occurs to set it up. These effects may be, and are almost entirely avoided, by the more scientific plan of milking adopted in other parts of the country, where, instead of drawing down or stripping the teat between the thumb and fingers, the dairy maid follows more closely the principles which instinct has taught the calf. (The calf jerks its nose into the udder, and forces down the milk.) She first takes a slight hold of the teat with her hand, by which she merely encircles it, then lifts her hand up, so as to press the body of the udder upwards, by which the milk escapes into the teat, or if (as is generally the case when some hours have elapsed between milking times) the teat is full, she grasps the teat close to its origin with her thumb and fore finger, so as to prevent the milk which is in the teat from escaping upwards; then making the rest of the fingers to close from above downwards in succession, forces out what milk may be contained in the teat through the opening of it. The hand is again pressed up and closed as before, and thus, by repeating this action, the udder is completely emptied, without that coarse tugging and tearing of the teat which is so apt to produce disease.—*Quar. Jour. Agri.*

Management of Calves.—The management of calves designed for veal is different among different farmers; but in some neighbourhoods, the usual period of keeping them is about four weeks. A friend of ours has been very successful for many years in producing veal of the finest quality, by the following method: during the first fortnight, the calf is allowed one half the milk, three quarters during the third week, and the whole during the fourth week. This is the rule for common cows. In extraordinary cases, he allows more or less, according to circumstances; but deems it of great importance that the calf should be *full fed* during the last week.

The reason which is given for this practice, is, that if the calf takes all the milk at first, it will grow fast, and soon become too large for its supply of nourishment; but if it be stinted at first, mother's milk will be commonly sufficient to fatten it at the close of the month.—*Gen. Far.*

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Butter.—A friend waited on us, yesterday, to communicate the result of a process, which had been recommended to him of restoring butter to its original sweetness. Incredulous as he was, he made the experiment, and he authorizes us to say it was entirely satisfactory. It consists simply of churning the butter with sweet fresh milk, in the proportion of about two pounds of the former to half a gallon of the latter. Butter, thoroughly rancid, by this simple process, was rendered sweet and good. Our citizens, in view of the present scarcity and dearness of butter of even tolerable quality, will not fail to appreciate this discovery.—*Fredericksburg Arena.*

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Skinless Oats.—At the meeting of the Warwickshire Agricultural Society, a specimen of the *Avenaica Farina*, or skinless oat, was produced by the Rev. Mr. Knott, which had been plucked that morning out of a piece of ground belonging to that gentleman, at Wormleighton. I was produced from seed furnished to him from Mr. Trucker, of Heanton Punchardon, near Barnstable, Devonshire. According to the account furnished to us by that gentleman, it was grown in the season of 1833, for the first time it was ever produced in Great-Britain, by Thomas Derenzy, Esq. of Clebemon Hall, who obtained the seed through a friend of his at Rotterdam, whether it was imported from Shantag, a remote district in China, and was quite unknown to Europeans till within these three years. The advantages which this extraordinary and valuable grain possesses over all other kinds of oats are numerous, viz: When thrashed from the sheaf, it is exactly like oatmeal, and is fit for immediate use for culinary purposes, and every other sort which oatmeal is consumed for, the grain being quite free from every particle of rind or husk. The flavour is delicious, and it contains much more farinaceous matter. There is, of course, considerable saving of oats, and expense of kiln-drying, sifting, &c. &c. and one peck of it contains more nutricious food for a horse than three pecks of common oats. The produce is most astonishing, the average being twenty-six barrels; of fourteen stone, to the Irish acre—the exact quantity grown by Mr. Derenzy on one acre. It was not sown till the 4th of May, 1830, and was reaped early in August the same year. It is remarkably hardy, and well adapted to this climate.—*N. Y. Far.*

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The quickest way to Procure Grapes.—The quickest method of procuring grapes, is to graft into the body, near the ground, or, which is preferable, into the roots of large vines. In the following year, if the graft has taken, fruit will be produced. Thus every farmer, who has wild vines growing on his ground, may, by procuring cuttings of hardy foreign or native kinds, and paying a little attention to the grafting and training, be soon and amply supplied with grapes for market and wine making.—*Prac. Gard.*

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Means of Rendering the Vine more Productive.—A foreign journal, of some ability, recommends four ounces of alum to be mixed with four pellets of clay, by means of a sufficient quantity of water, and the roots of the vine being uncovered on a fine day towards the end of the winter, they are to be moistened with this mixture, and the earth then changed, so that what was previously uppermost shall be undermost It is asserted that through this operation a vine produces a great additional quantity of grapes.

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The Apple.—If the branch of an apple tree be taken off whilst it is in blossom, and immediately planted in swampy ground, it will take root and bear fruit that season. This mode has been tried with success; therefore, it is probable that the branch of a pear, peach, plum, mulberry, or any other fruit tree, if

taken off in spring or summer, whilst the tree is in full sap, will also take root and become a new tree. Thus, choice fruits, such as the old nonpariels, golden pippins, &c. may be forever sustained.—*Hort. Reg.*

Bee House.—We have seen a bee house, the method of constructing which, was introduced into our country by Mr. Eber Wilcox, of Salem, and which is said to be a very valuable improvement. Several individuals have tried it with entire success. It consists of a house of brick or wood, (if wood standing on staks,) say of the size of a common smoke-house, with a door to admit of the entrance of a man. The inside is merely furnished with shells like an ordinary pantry. The bees pass in and out through several apertures resembling spouts, arranged in rows on each side. These spouts project six inches, and the hole is perhaps two or three inches wide, by from one-eighth to one-half an inch in height. The benefits of this method are said to be these: the bees never swarm, but continue filling up the house; the honey may be easily taken out, when the bees retire to the bottom of the combs in cold weather; and it is said to be an infallible preventative to the worms, and the light fingers of the night gentry.—*Cortland Adv.*

Treatment of Young Turkies.—The principal remedy necessary in the first instance appears to be a stimulant, to counteract the extreme feebleness which attends young turkies more than other fowls, in the earliest stages of their existence; hence, a grain of pepper, &c. is usually administered as soon as hatched. But instinct, their infallible guide, it appears, has more successfully directed them to the wild onion, which is proved to be a powerful restorative to their natures, and in fact, a grand panacea to the race. When they are permitted to ramble, you will see them busily cropping the green blades of the onion, with much apparent enjoyment.

Small hominy made wet, with the addition of a portion of the wild onion chopped fine, or any other onion tops that can be procured, affords the best and most wholesome food they can have for several weeks at least, or so long as they are confined to small enclosures.

Last spring, I witnessed with astonishment the wonderful efficacy of this article of food on a large flock of turkies, which had been daily and rapidly diminishing during the long rainy season in May. The mortality ceased the first day after their change of food to the above mixture of hominy and onions; and in two or three days, their rapid growth and improvement was visible to every eye.

Turkies are very fond of green food of any kind, particularly lettuce and cabbage, and by the time they have grown off pretty well on the onions, there is plenty of that sort of provisions. Cabbage leaves, chopped and prepared in the following manner, may then be given twice a day with good effect, morning and evening.

After the leaves are chopped, put them in tubs of water, to remain all night, and early in the morning spread the meal on boards before them: in the same way, prepare that for the evening, by times in the morning. Continue also to feed them on hominy, so long as they may require your care, and I venture to say that the good housewife, without uncommon accidents, will have no reason to complain of the want of a good dish, whilst turkey is in season.

With my best wishes for the prosperity of your valuable exertions in behalf of the general welfare.

I remain, yours, respectfully,

HASSINA.—*Far. Reg.*